## Exhibit 1

mor Worlds, LLC v. Apple, Inc.

Doc. 166 Att. 2

	Page 6		Page 7
1	STEPHEN FEINER	1	STEPHEN FEINER
2	STEPHEN FEINER,	2	case that involved Skyline I don't
3	having been first duly sworn by	3	remember their full name and Google.
4	Barbara R. Zeltman, Notary Public, was	4	Q And in each of those cases, did you
5	examined and testified as follows:	5	submit an expert report?
6	EXAMINATION BY MR. STEIN:	6	A Yes, I did.
7	Q Good morning, Dr. Feiner.	7	Q Did you give trial testimony in any
8	My name is Ken Stein, and I'm	8	of those cases?
9	going to be asking you some questions	9	A I gave trial testimony in two of
10		10	those cases.
11		11	Q Which two?
12		12	A The first two.
13		13	Q And when was the first one?
14		14	A When was it? I don't remember. It
15		15	would have been on the list of prior
16	Q Three times?	16	engagements that I gave to counsel.
17	And for each time, can you tell	17	Q Was it within the last five years?
18	me what it was in connection with?	18	A I do not think so.
19	A The first time was in connection	19	Q And the second case, when was that?
20	with a case that involved Adobe and	20	A The Canon case may have been 2005,
21	Macromedia.	21	'6, '7, something like that.
22	The second time was in a case	22	Again, I do not remember the
23	that involved St. Clair Intellectual	23	exact date. It could have been 2004. I
24	Property and Canon.	24	don't remember.
25	And the third time was in a	25	Q In the Skyline case
	Page 8		Page 9
1	STEPHEN FEINER	1	STEPHEN FEINER
2	A I believe that was 2007.	2	matter of that patent?
3	Q 2007.	3	A The subject matter of the patent
4	Are all those cases over at	4	involved aspects of a drawing system.
5	this point?	5	Q So would it be fair to say that the
6	A Those are all over, yes.	6	subject matter was broadly directed to
7	Q Were they all patent cases?	7	computer graphics?
8	A They were all patent cases.	8	A Computer graphics and graphical user
9	Q What was the subject matter of the	9	interfaces.
10	Adobe was that Adobe v. Macromedia?	10	Q And what was the subject matter of
11	A I don't remember if it was Adobe v.	11	the St. Clair Intellectual Property v. Canon
12	Macromedia or Macromedia v. Adobe. This was	12	case?
13	a situation where they were suing and	13	A A set of patents owned by St. Clair
14	countersuing each other.	14	that were being asserted against Canon.
15	I know I was involved in two	15	Q And just broadly, what was the
16	cases, one of which they settled before	16	subject matter of those patents?
17	the second one reached the point at	17	A The patents involved certain ways of
18	which I was to be deposed. And I don't	18	storing images in digital cameras.
19	remember whether the two of them were A	19	Q Would you broadly characterize the
20	versus B and the second was B versus A,	20	subject matter of that case as related to
21	or if they were both A versus B.	21	computer graphics?
22	That case involved computer	22	A I think it could be characterized as
23	software that embodied a Macromedia	23	relating to computer image processing and
24	patent.	24	user interfaces for devices such as digital
25	Q And broadly, what was the subject	25	cameras.

J	Dago 10		Page 11
1	Page 10		Page 11
1	STEPHEN FEINER	1	STEPHEN FEINER
2	Q So coming back to the first case,	2	representing and processing data in systems
3	which party did you represent in the	3	such as certain ways of processing and
4	Adobe/Macromedia case?	4	accessing data in systems that would
5	A I was hired by Macromedia. I'm not	5	represent large geographical areas.
6	sure if I actually represented them.	6	Q Would you characterize the subject
7	Q And in the St. Clair v. Canon case,	7	matter of that case as relating to computer
8	which party	8	graphics?
9	A Canon.	9	A Yes, I would.
10	Q Canon.	10	Q I'm sorry if I asked you this
11	And the third case, Skyline,	11	before, but did you say you testified at
12	was that Skyline v. Google?	12	trial in the first two?
13	A That was Skyline v. Google, yes.	13	A I testified at trial in the first
14	Q And what was the subject matter of	14	two, yes.
15	that	15	Q I actually might have been better to
16	A I'm sorry. I	16	say this before. I just want to go over a
17	MR. BROWN: Just let him finish	17	couple of the ground rules before we get
18	the question. That makes it easier for	18	started with the questions.
19	the court reporter.	19	You're probably familiar with
20	Q What party did you represent in the	20	this from your prior deposition
21	Skyline v. Google case?	21	testimony and probably from talking to
22	A Google.	22	your counsel.
23		23	You are represented by counsel
1	Q And what was the subject matter of that case?	24	today?
24 25		25	A I'm not sure whether I am or not.
25	A That case involved certain ways of	23	
1	Page 12		Page 13
l l		1	
1	STEPHEN FEINER	1	STEPHEN FEINER
1 2	STEPHEN FEINER MR. BROWN: We're representing	1 2	try to accommodate your request for a break.
		1	try to accommodate your request for a break.  Do you understand?
2	MR. BROWN: We're representing	2	try to accommodate your request for a break.
2	MR. BROWN: We're representing Apple.	2 3	try to accommodate your request for a break.  Do you understand?
2 3 4	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will	2 3 4	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.
2 3 4 5	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if	2 3 4 5	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can
2 3 4 5 6 7	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury,	2 3 4 5	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give
2 3 4 5 6	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct?	2 3 4 5 6 7	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.
2 3 4 5 6 7 8	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand.	2 3 4 5 6 7 8	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.
2 3 4 5 6 7 8 9	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear	2 3 4 5 6 7 8 9	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.
2 3 4 5 6 7 8 9 10	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question	2 3 4 5 6 7 8 9	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my
2 3 4 5 6 7 8 9 10 11	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs	2 3 4 5 6 7 8 9 10 11	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?
2 3 4 5 6 7 8 9 10 11 12	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll	2 3 4 5 6 7 8 9 10 11 12	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.
2 3 4 5 6 7 8 9 10 11 12 13	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear.	2 3 4 5 6 7 8 9 10 11 12 13	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and
2 3 4 5 6 7 8 9 10 11 12 13 14 15	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay? A Yes, I will do that.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay? A Yes, I will do that. Q And if you answer a question, I will	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. BROWN: We're representing Apple.  BY MR. STEIN:  Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct?  A Yes, I understand.  Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear.  Okay?  A Yes, I will do that.  Q And if you answer a question, I will assume you understood the question.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as an expert in this case, correct?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. BROWN: We're representing Apple.  BY MR. STEIN:  Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct?  A Yes, I understand.  Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear.  Okay?  A Yes, I will do that.  Q And if you answer a question, I will assume you understood the question.  Do you understand that?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as an expert in this case, correct?  A That is correct.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay? A Yes, I will do that. Q And if you answer a question, I will assume you understood the question. Do you understand that? A I understand.	2 3 4 5 6 7 8 9 10 11 2 13 14 15 16 17 18 19 20	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as an expert in this case, correct?  A That is correct.  Q Are you being compensated for your
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay? A Yes, I will do that. Q And if you answer a question, I will assume you understood the question. Do you understand that? A I understand. Q If at any time you need to take a	2 3 4 5 6 7 8 9 10 11 2 13 14 15 17 18 19 20 21	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as an expert in this case, correct?  A That is correct.  Q Are you being compensated for your testimony today?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay? A Yes, I will do that. Q And if you answer a question, I will assume you understood the question. Do you understand that? A I understand. Q If at any time you need to take a break, let me know, and I'll try to	2 3 4 5 6 7 8 9 10 11 2 13 14 15 16 17 18 19 20 21 22	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as an expert in this case, correct?  A That is correct.  Q Are you being compensated for your testimony today?  A Yes, I am.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay? A Yes, I will do that. Q And if you answer a question, I will assume you understood the question. Do you understand that? A I understand. Q If at any time you need to take a break, let me know, and I'll try to accommodate your request as soon as I can.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as an expert in this case, correct?  A That is correct.  Q Are you being compensated for your testimony today?  A Yes, I am.  Q How much is your compensation?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. BROWN: We're representing Apple. BY MR. STEIN: Q You understand that today you will be answering questions under oath, just as if you were in court before a judge and a jury, correct? A Yes, I understand. Q And you know, we need to get a clear transcript. So any time I ask you a question that you feel is unclear or needs clarification, please let me know, and I'll try to make it clear. Okay? A Yes, I will do that. Q And if you answer a question, I will assume you understood the question. Do you understand that? A I understand. Q If at any time you need to take a break, let me know, and I'll try to	2 3 4 5 6 7 8 9 10 11 2 13 14 15 16 17 18 19 20 21 22	try to accommodate your request for a break.  Do you understand?  A Yes, I understand. Thank you.  Q Is there any reason that you can think of that you would not be able to give your best and most accurate testimony today?  A No reason that I can think of.  Q Can you please state your full name and address for the record.  A Do you want my home address or my work address?  Q Home address.  A My name is Stephen Keith Feiner, and my home address is 90 Morningside Drive, New York, New York.  Q You have been retained by Apple as an expert in this case, correct?  A That is correct.  Q Are you being compensated for your testimony today?  A Yes, I am.

	Page 26		Page 27
1	STEPHEN FEINER	1	STEPHEN FEINER
2	Q Can you tell me what classes you	2	alternating semesters, teaching one
3	have taught at Columbia?	3	course per semester, the graduate
4	A Certainly.	4	computer graphics course and the
5	In my first semester at	5	software engineering course.
6	Columbia, I taught a course on digital	6	And then there came a time, and
7	logic, a graduate digital logic course,	7	I don't remember what that time was, at
8	which is basic circuitry and principles	8	which I replaced the software
9	that underlie, at a very low level,	9	engineering course with a user interface
10		10	design course.
11	The second semester, I taught	11	I later taught, at least twice,
12		12	a graduate course on mobile and wearable
13		13	computing. And now I pretty much
14		14	alternate between a user interface
15	there I'm not sure I have this	15	design course and a course on 3D user
1		16	interfaces and augmented reality.
16	right I think I'm actually wrong	17	In addition, I pretty much
17	about the second semester.	3	
18	The second semester was	18	every semester teach project courses, which are ones in which individual
19	probably the first semester that I	19	li de la companya de
20	taught my computer graphics course.	20	students register, everywhere from
21	And I know that I taught the	21	undergraduates all the way up through
22	digital logic course only once, and that	22	graduate students, to work with me and
23	was then replaced with the software	23	my students on specific projects,
24	engineering course.	24	sometimes on visual projects, sometimes
25	And I went for a while	25	group projects.
F	***************************************	3	
	Page 28		Page 29
1	Page 28 STEPHEN FEINER	1	Page 29 STEPHEN FEINER
I	STEPHEN FEINER	1 2	STEPHEN FEINER
2	STEPHEN FEINER They get course credit for	ş	STEPHEN FEINER group has been in fact that research.
2 3	STEPHEN FEINER They get course credit for that, but it's not a course that	2	STEPHEN FEINER
2 3 4	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular	2	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in
2 3 4 5	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.	2 3 4	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research
2 3 4 5 6	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an	2 3 4 5	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an assistant professor in 1985, what areas of	2 3 4 5 6 7	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have?	2 3 4 5 6 7 8	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have	2 3 4 5 6 7 8 9	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics	2 3 4 5 6 7 8 9	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the	2 3 4 5 6 7 8 9 10 11	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are	2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an assistant professor in 1985, what areas of research focus did you have?  A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating	2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system. In many cases, my research has	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system. In many cases, my research has addressed ones that take advantage of 3D	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures. Q Since starting working as an assistant professor in 1985, what areas of research focus did you have? A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system.  In many cases, my research has addressed ones that take advantage of 3D interaction, although there have been a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an assistant professor in 1985, what areas of research focus did you have?  A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system.  In many cases, my research has addressed ones that take advantage of 3D interaction, although there have been a number of projects that we've worked on	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an assistant professor in 1985, what areas of research focus did you have?  A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system.  In many cases, my research has addressed ones that take advantage of 3D interaction, although there have been a number of projects that we've worked on that have been more in the 2D realm.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an assistant professor in 1985, what areas of research focus did you have?  A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system.  In many cases, my research has addressed ones that take advantage of 3D interaction, although there have been a number of projects that we've worked on that have been more in the 2D realm.  My dissertation work was on the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an assistant professor in 1985, what areas of research focus did you have?  A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system.  In many cases, my research has addressed ones that take advantage of 3D interaction, although there have been a number of projects that we've worked on that have been more in the 2D realm.  My dissertation work was on the use of AI techniques to automatically	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER group has been in fact that research. One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER They get course credit for that, but it's not a course that actually meets in a room on a regular basis with lectures.  Q Since starting working as an assistant professor in 1985, what areas of research focus did you have?  A The main foci of my research have been on various aspects of computer graphics and user interfaces, including the development of user interfaces that are intended to supplement or replace the interface that one might experience in a graphical user interface to an operating system.  In many cases, my research has addressed ones that take advantage of 3D interaction, although there have been a number of projects that we've worked on that have been more in the 2D realm.  My dissertation work was on the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER group has been in fact that research.  One of the first projects I worked on in fact at Columbia, and in fact one of the longest research collaborations I've had, was with a colleague of mine who does natural language generation. And we've done a number of projects together that automatically generate combinations of graphics and text to explain stuff in a variety of different domains.  I've also done work, both separately and as well together with some of the things I just mentioned, on mobile user interfaces to computer systems, including wearable ones.  A lot of that work has also concentrated on systems in which the displays are built into things that are more or less like a pair of glasses and that overlay graphics in conjunction, in

1	Page 86		Page 87
	STEPHEN FEINER	1	STEPHEN FEINER
2	testifying, as I am right now, with	2	pretty sure have included machines that
3	regard to this case.	3	are running Leopard. And I may well
4	So here I'm referring to the	4	have used this feature on one of those
5	notion of being able to see spread out,	5	machines.
6	in the kind of spread-out browsing	6	Q Do you recall using it?
7	described in the Mander paper, the	7	A I don't know.
8	contents of a stack of items.	8	I don't really use their
9		9	machines all that much. Sometimes I use
10		10	them in the process of working on a
11		11	paper, and I may well have played with
•	use it very much, although it is used by my	2	
12	wife, a Mac. But I'm very sure that it does	12 13	this, and I may well have not. I don't
13	I	2	remember.
14	Q Have you ever used this particular	14	Q Do you know the relationship between
15	S	15	the figure shown in the left-hand portion of
16	page Feiner 205?	16	that slide labeled 20 on the bottom of page
17	A I have used I do not personally	17	Feiner 205 and the figure shown in the
18	1	18	right-hand portion?
19	to think if that machine is in my lab.	19	A What do you mean by, "the
20	I have neither purchased nor	20	relationship"?
21	received in any way, personally or for	21	Q Do you understand that when I say
22	my lab, a machine that has Leopard on	22	"slide," this looks like a slide from a
23	it.	23	presentation? And the one at the bottom of
24	I have, however, used at times	24	the page is labeled 20, correct?
25	machines owned by my students which I'm	25	A That is correct.
	Page 88		Page 89
1	STEPHEN FEINER	1	STEPHEN FEINER
2	Q And there's two figures at the	2	do you know of any strike that.
3	bottom, you know, within slide 20, in that	3	Other than this particular
4	figure, correct?	4	feature shown in slide 20 on Feiner 205,
5	A That is correct.	5	do you know if Apple has ever
6	Q To your knowledge, is there a		
Ö		6	
7		7	implemented piles in any form, as
7	relationship between the figure on the left	7	implemented piles in any form, as described in the Mander et al. paper, in
7 8	relationship between the figure on the left and the figure on the right?	6 7 8 9	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?
7 8 9	relationship between the figure on the left and the figure on the right?  A I believe that there is a	7 8 9	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.
7 8 9 10	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.	7 8 9 10	implemented piles in any form, as described in the Mander et al. paper, in a commercial product? MR. BROWN: Objection. A I am not an expert on Apple
7 8 9 10 11	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?	7 8 9 10 11	implemented piles in any form, as described in the Mander et al. paper, in a commercial product? MR. BROWN: Objection. A I am not an expert on Apple commercial products. So I haven't studied
7 8 9 10 11	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show	7 8 9 10 11 12	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to
7 8 9 10 11 12	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that	7 8 9 10 11 12 13	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually
7 8 9 10 11 12 13	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.	7 8 9 10 11 12 13	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.
7 8 9 10 11 12 13 14	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects	7 8 9 10 11 12 13 14 15	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to
7 8 9 10 11 12 13 14 15	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?	7 8 9 10 11 12 13 14 15 16	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without
7 8 9 10 11 12 13 14 15 16 17	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.	7 8 9 10 11 12 13 14 15 16 17	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's
7 8 9 10 11 12 13 14 15 16 17	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.  Q Do you know how to display the one	7 8 9 10 11 12 13 14 15 16 17	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's commercial products.
7 8 9 10 11 12 13 14 15 16 17 18	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.  Q Do you know how to display the one on the right?	7 8 9 10 11 12 13 14 15 16 17 18	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's commercial products.  Q Can you think of any strike that.
7 8 9 10 11 12 13 14 15 16 17 18 19 20	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.  Q Do you know how to display the one on the right?  A No, I do not.	7 8 9 10 11 12 13 14 15 16 17 18 19 20	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's commercial products.  Q Can you think of any strike that.  Can you think of any reason why
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.  Q Do you know how to display the one on the right?  A No, I do not.  Q Do you know, when the stack on the	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's commercial products.  Q Can you think of any strike that.  Can you think of any reason why a company would not want to implement
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.  Q Do you know how to display the one on the right?  A No, I do not.  Q Do you know, when the stack on the left gets too large, whether the system	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's commercial products.  Q Can you think of any strike that. Can you think of any reason why a company would not want to implement piles as described in the Mander et al.
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.  Q Do you know how to display the one on the right?  A No, I do not.  Q Do you know, when the stack on the left gets too large, whether the system automatically displays the one on the right?	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's commercial products.  Q Can you think of any strike that.  Can you think of any reason why a company would not want to implement piles as described in the Mander et al. paper?
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	relationship between the figure on the left and the figure on the right?  A I believe that there is a relationship between them, yes.  Q And what is the relationship?  A I believe that both of them show different ways of displaying the items that are in a stack in a doc.  Q Do you know if the user selects which one of these ways it is displayed?  A I do not know.  Q Do you know how to display the one on the right?  A No, I do not.  Q Do you know, when the stack on the left gets too large, whether the system	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	implemented piles in any form, as described in the Mander et al. paper, in a commercial product?  MR. BROWN: Objection.  A I am not an expert on Apple commercial products. So I haven't studied Apple commercial products carefully to determine whether or not they have actually implemented piles in them. I don't know.  It would not be fair for me to give you an answer on that without carefully studying all of Apple's commercial products.  Q Can you think of any strike that. Can you think of any reason why a company would not want to implement piles as described in the Mander et al.

Page 90	D 01 h
	Page 91
1 STEPHEN FEINER 1 STEPHEN FEINE	ER
2 developed. They include issues of trying to 2 There's other issues.	, again
3 incorporate them in a clear and consistent 3 based on discussions in the	ne paper, on
way within the user interface, if we're 4 slide 17 on Feiner 204. A	
5 talking about a user interface facility or a 5 all things that if one want	ed to make a
6 facility that has some kind of user 6 clean, consistent, understa	
7 interface, constrained by 1	
8 One reason would be that there 8 there already are products	
9 might be issues that would need to be 9 company makes whose us	
very carefully resolved to create an 10 if you break things that the	
11 extension that would not break things 11 to.	iej ie useu
that people were already familiar with.  12 One reason for not i	implementing
13 So recalling the Mander paper, 13 something would be that y	
14 for example, there's a number of issues 14 need to think more careful	
that are mentioned. I think I actually 15 to make sure it gets incorp	
16 discuss some of those in this document   16 properly.	poratou
here, which are ways about how one 17 Another reason thin	ac don't get
18 manipulates a pile.   18 implemented could be that	
1	
1	
whether you can move a pile by clicking 23 assign people to actually	
and dragging, or whether you move the 24 aspects of the operating s	
document by clicking and dragging. 25 there are other things you	may consider
Page 92	Page 93
1 STEPHEN FEINER 1 STEPHEN FEINE	R .
2 to be more important. 2 Q Apart from general	considerations
There are many, many reasons 3 that might apply to a varie	ty of different
4 that companies, not just Apple, but 4 types of software, can you	think of any
5 other companies I can think of whose 5 specific reasons why a cor	npany would not want
6 researchers I've spoken with in some 6 to implement piles in their	operating system?
7 cases, who have gotten the company 7 A When you say "pile	
8 I'm not talking about Apple at this 8 piles as described in the M	
9 point, but another company to 9 paper?	
10 incorporate an early version of an 10 Q Yes.	
operating system release functionality   11 A And you said outside	de of which
to do something that they really wanted 12 reasons?	
to do, and then have that company, folks   13 Q Outside of general 1	reasons that may
who actually worked on the released 14 apply to any product or fee	
operating system, turn around and yank 15 implemented in a commer	
16 it out before the release because it 16 think of any specific reaso	
just wasn't at the top of their stack of 17 would not want to implem	
18 important things, and they wanted to 18 particular in a commercial	
19 spend their time on other things and 19 A I thought I gave a spend to 19 A I thought I gave a sp	
20 didn't want to include something that 20 before. And in fact, on the	~
21 would, for example, maybe not be as 21 I just mentioned, I mentioned	
,	•
	_
work really well. 25 some particular issues hav	ing to do with

1 STEPHEN FEINER 2 art that would make sense to anyone. 3 The only use of the term 4 "stream" that I'm familiar with in 5 computer science would be, for example, 6 "stream I/O" in UNIX, which I really 7 don't think this has anything to do 8 with. 9 Q Does the term "diary" have a special 10 meeting in computer science? 11 A "Diary" does not have a special 12 meaning in computer science. 13 Q How about "electronic life"? 14 Does that have a special meeting in computer science? 15 A That does not have a special more in computer science, at least not one that I know of. 16 A That does the phrase "diary of a person or entity's electronic life" mean? 17 A If you'll permit me to elaborate a little bit, think is is computer science — 1t's not work that I do, but I know colleagues of mine who do — which  Page 144  1 STEPHEN FEINER 2 sounds a little bit like it. But I don't think that has anything to do with that.  I'm trying to think. If someone said, "electronic life," to a computer scientist, I suspect that without any context, some folks would say, "Are you referring to artificial life?" Because again, it's a similar-sounding term.  And as I said, it has nothing to do, I think, with what's in the patents.  Q What does the phrase "diary of a person or entity's electronic life" mean?  A Looking at the specification of the things that happen to a person or an entity.  A If you'll permit me to elaborate a little bit, think that in is is referring to the things that happen to a person or an entity.  Page 144  Page 145  Page 145  STEPHEN FEINER 2 utomatically a diary of what that
art that would make sense to anyone. The only use of the term "stream" that I'm familiar with in computer science would be, for example, "stream I/O" in UNIX, which I really don't think this has anything to do with. Q Does the term "diary" have a special meeting in computer science.  A "Diary" does not have a special meeting in computer science. Q How about "electronic life"?  Does that have a special meeting in computer science?  A That does not have a special meeting in computer science?  A That does not have a special meeting in computer science?  A That does not have a special meeting in computer science?  A That does not have a special meeting in computer science, A That does not have a special meeting in computer science, at least not one that I know of.  A If you'll permit me to elaborate a person or entity's electronic life, mean?  A If you'll permit me to elaborate a there are folks doing artificial life in a somputer science - it's not work that I do, but I know colleagues of mine who do which  Page 144  STEPHEN FEINER   STEPHEN FEINER   Sounds a little bit like it. But I don't think that has anything to do with that. I'm trying to think. If someone said, "electronic life," to a computer scientist, I suspect that without any context, some folks would say, "Are you referring to artificial life." to a computer scientist, I suspect that without any context, some folks would say, "Are you referring to artificial life." a similar-sounding term.  A "Diary" does not have a special person or entity is a similar-sounding term.  A Looking at the specification of the patent, I think that this is referring to the things that happen to a person or an entity.  A netity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion ofbecause it is in the context of this
The only use of the term  The only use of the term  The stream" that I'm familiar with in  Computer science would be, for example,  Stream I/O" in UNIX, which I really  don't think this has anything to do  with.  Q Does the term "diary" have a special  meeting in computer science?  Does that have a special  meaning in computer science.  Q How about "electronic life"?  A That does not have a special meeting in computer science?  A That does not have a special mount of the in computer science, at least not one that I know of.  A That does the phrase "diary of a person or entity's electronic life" mean?  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, and as I said, it has nothing to do, I think, with what's in the patents.  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, and as I said, it has nothing to do, I think, with what's in the patents.  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, and as I said, it has nothing to do, I think, with what's in the patents.  A Looking at the specification of the phatent, I think that this is referring to the things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER  The trying to think. If  someone said, "electronic life," to a computer science, without any context, some folks would without any context, some folks would and said, "electronic life," to a computer scientist, I suspect that without any context, some folks would without any context, some folks would without any context, some folks would as as inilities?  A That does not have a special ilife?" Because again, it's a similar-sounding term.  And as I said, it has nothing to do, I think, with what's in the patents.  Q What does the phrase "diary of a person
"stream" that I'm familiar with in computer science would be, for example, stream I/O" in UNIX, which I really don't think this has anything to do with.  9 Q Does the term "diary" have a special meeting in computer science?  10 Meeting in computer science?  11 A "Diary" does not have a special meaning in computer science?  12 To Boes that have a special meeting in computer science?  13 Does that have a special meeting in computer science?  14 Does that have a special meeting in computer science?  15 Does that have a special meeting in computer science?  16 A That does not have a special meeting in computer science?  17 Does that have a special meeting in computer science?  18 Material Meeting in computer science?  19 Q Well, what does the phrase "diary of a person or entity's electronic life" mean?  19 Q Well, what does the phrase "diary of a person or entity's electronic life" mean?  20 A If you'll permit me to elaborate a little bit, thinking in fact electronic life, and a serial life in like thinking in fact electronic life, and think that this is computer science — it's not work that I do, but I know colleagues of mine who do — which the specific specific in the context of this strepthen FEINER  10 I'm trying to think. If some computer scientist, I suspect that without any context, some folks would as any, Tare you referring to artificial I be do, I think
someone said, "electronic life," to a computer science would be, for example, don't think this has anything to do with.  Q Does the term "diary" have a special meeting in computer science?  A "Diary" does not have a special meaning in computer science.  Q How about "electronic life"?  A That does not have a special meeting in computer science, at least not one that I know of.  Q Well, what does the phrase "diary of a person or entity's electronic life" mean?  A If you'll permit me to elaborate a page 144  STEPHEN FEINER  STEPHEN FEINER  Sameone said, "electronic life," to a computer scientist, I suspect that without any context, some folks would without any context, some folks would without any context, some folks would say, "Are you referring to artificial person or entity's a similar-sounding term.  A "Diary" does not have a special 11  And as I said, it has nothing to do, I think, with what's in the patents.  Q What does the phrase "diary of a person or entity's electronic life" mean?  A Looking at the specification of the things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this
stream I/O" in UNIX, which I really don't think this has anything to do with.  8 with.  9 Q Does the term "diary" have a special peating in computer science?  10 meeting in computer science.  11 A "Diary" does not have a special peating in computer science.  12 to do, I think, with what's in the patents.  13 Does that have a special peating in computer science?  14 Does that have a special peating in computer science?  15 meeting in computer science?  16 A That does not have a special person or entity's electronic life" mean?  17 A That does not have a special peating in computer science, at least not one that I patents.  18 know of.  19 Q Well, what does the phrase "diary of a person or entity's electronic life" mean?  20 A If you'll permit me to elaborate a person or entity's electronic life, at hink thinking in fact electronic life, but I know colleagues of mine who do which  10 Computer scientist, I suspect that without any context, some folks would say, "Are you referring to artificial life in without any context, some folks would without any context, some folks would was, "Are you referring to artificial life?" Because again, it's a similar-sounding term.  10 A "Diary" does not have a special patents.  11 And as I said, it has nothing to do, I think, with what's in the patents.  12 Q What does the phrase "diary of a person or entity's electronic life" mean?  13 A Looking at the specification of the patent, I think that this is referring to the things that happen to a person or an entity.  20 A If you'll permit me to elaborate a patent, I think that this is referring to the things that happen to a person or an entity.  21 A If you'll permit me to elaborate a person or entity's electronic life, at think that this is a thing.  22 Electronic life," I think, has to do with data. And I think this is basically talking about the notion of
don't think this has anything to do  with.  Q Does the term "diary" have a special  meeting in computer science?  A "Diary" does not have a special  patents.  Q How about "electronic life"?  A That does not have a special meeting in computer science?  A That does not have a special meaning in computer science, at least not one that I know of.  Q Well, what does the phrase "diary of a person or entity's electronic life" mean?  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, but I know colleagues of mine who do which  Page 144  STEPHEN FEINER   without any context, some folks would say, "Are you referring to artificial life?" Because again, it's a similar-sounding term.  A meeting in computer science.  10 similar-sounding term.  And as I said, it has nothing to do, I think, with what's in the patents.  Q What does the phrase "diary of a person or entity's electronic life" mean?  A Looking at the specification of the things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this
8 with. 9 Q Does the term "diary" have a special 10 meeting in computer science? 11 A "Diary" does not have a special 12 meaning in computer science. 13 Q How about "electronic life"? 14 Does that have a special 15 meeting in computer science? 16 A That does not have a special meaning 17 in computer science, at least not one that I 18 know of. 19 Q Well, what does the phrase "diary of a parent, I think that this is referring to the things that happen to a person or an entity. 19 Q Well, what does the phrase "diary of a parent, I think that this is referring to the things that happen to a person or an entity. 19 Q Well, what does the phrase "diary of a parent, I think that this is referring to the things that happen to a person or an entity. 19 A If you'll permit me to elaborate a 20 little bit, thinking in fact electronic life, 21 is a thing. 21 Little bit, thinking in fact electronic life, 22 is a thing. 22 lower are folks doing artificial life in 23 to do with data. And I think this is 24 computer science it's not work that I do, 25 but I know colleagues of mine who do which 25 because it is in the context of this  Page 144  1 STEPHEN FEINER  1 STEPHEN FEINER
9 Q Does the term "diary" have a special 10 meeting in computer science? 11 A "Diary" does not have a special 12 meaning in computer science. 13 Q How about "electronic life"? 14 Does that have a special 15 meeting in computer science? 16 A That does not have a special meaning 17 meoning in computer science? 18 meeting in computer science? 19 A That does not have a special meaning 10 meaning in computer science? 11 A That does not have a special meaning 12 meeting in computer science? 13 Does that have a special 14 Q What does the phrase "diary of a person or entity's electronic life" mean? 15 patent, I think that this is referring to the things that happen to a person or an entity. 16 A If you'll permit me to elaborate a person or entity's electronic life" mean? 17 A nentity could be a corporation or it even could be a machine, for that matter. Entity is a thing. 18 Ittle bit, thinking in fact electronic life, 22 melectronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this  18 Page 144  19 STEPHEN FEINER 10 Items again, it's a similar-sounding term. And as I said, it has nothing to do, I think, with what's in the patents.  And as I said, it has nothing to do, I think, with what's in the patents.  A Looking at the specification of the patent, I think that this is referring to the things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this
meeting in computer science?  A "Diary" does not have a special meaning in computer science.  Q How about "electronic life"? Does that have a special meeting in computer science?  A That does not have a special meaning reading in computer science?  A That does not have a special meaning reading in computer science, at least not one that I meeting in computer science, at least not one that I meeting in computer science, at least not one that I meeting in computer science, at least not one that I meeting in computer science, at least not one that I meeting in computer science, at least not one that I meeting in computer science, at least not one that I meeting in computer science?  A Looking at the specification of the patent, I think that this is referring to the things that happen to a person or an entity.  A let you'll permit me to elaborate a person or entity's electronic life, mean?  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, at there are folks doing artificial life in life in computer science it's not work that I do, but I know colleagues of mine who do which  Page 144  STEPHEN FEINER  10  Similar-sounding term.  And as I said, it has nothing to do, I think, with what's in the patents.  Q What does the phrase "diary of a person or entity's electronic life" mean?  A Looking at the specification of the patent, I think that this is referring to the things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this
A "Diary" does not have a special meaning in computer science.  A nd as I said, it has nothing to do, I think, with what's in the patents.  A Does that have a special 14 Q What does the phrase "diary of a person or entity's electronic life" mean?  A That does not have a special meaning 16 A Looking at the specification of the in computer science, at least not one that I 17 patent, I think that this is referring to the things that happen to a person or an entity.  Q Well, what does the phrase "diary of 19 An entity could be a corporation or it even a person or entity's electronic life" mean?  A If you'll permit me to elaborate a 21 is a thing.  Ittle bit, thinking in fact electronic life, 22 "Electronic life," I think, has to do with data. And I think this is computer science it's not work that I do, 24 basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER 1 STEPHEN FEINER
meaning in computer science.  12 to do, I think, with what's in the patents.  13 patents.  14 Does that have a special 14 person or entity's electronic life" mean?  15 meeting in computer science? 15 person or entity's electronic life" mean?  16 A That does not have a special meaning 16 in computer science, at least not one that I 17 patent, I think that this is referring to the 18 know of. 18 things that happen to a person or an entity.  19 Q Well, what does the phrase "diary of 19 a person or entity's electronic life" mean? 20 could be a corporation or it even 20 a person or entity's electronic life" mean? 20 could be a machine, for that matter. Entity is a thing.  10 a person or entity's electronic life, 21 is a thing.  11 Electronic life, I think this is 24 computer science it's not work that I do, 24 basically talking about the notion of 25 but I know colleagues of mine who do which 25 because it is in the context of this  12 Table 144 Page 144  13 Does that have a special meaning 14 person or entity's electronic life" mean?  14 A Looking at the specification of the 17 patent, I think that this is referring to the 18 things that happen to a person or an entity.  15 A nentity could be a corporation or it even 20 could be a machine, for that matter. Entity is a thing.  16 Electronic life, I think, has 20 to do with data. And I think this is 20 basically talking about the notion of 25 because it is in the context of this
13 Q How about "electronic life"?  14 Does that have a special 15 meeting in computer science? 16 A That does not have a special meaning 17 in computer science, at least not one that I 18 know of. 19 Q Well, what does the phrase "diary of 20 a person or entity's electronic life" mean? 21 A If you'll permit me to elaborate a 22 little bit, thinking in fact electronic life, there are folks doing artificial life in 23 there are folks doing artificial life in 24 computer science it's not work that I do, but I know colleagues of mine who do which 26 STEPHEN FEINER 27 Jage 144 28 STEPHEN FEINER 29 What does the phrase "diary of a person or entity's electronic life" mean? 20 could be a machine, for that matter. Entity is a thing. 21 Little bit, thinking in fact electronic life, 22 "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this
Does that have a special  meeting in computer science?  A That does not have a special meaning in computer science, at least not one that I  know of.  Q Well, what does the phrase "diary of a patent, I think that this is referring to the things that happen to a person or an entity.  A nentity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  Ittle bit, thinking in fact electronic life, at there are folks doing artificial life in computer science it's not work that I do, but I know colleagues of mine who do which  Page 144  STEPHEN FEINER  Description or entity's electronic life, person or entity: A Looking at the specification of the patent, I think that this is referring to the things that happen to a person or an entity. An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this
meeting in computer science?  A That does not have a special meaning in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science, at least not one that I in computer science in computer scien
A That does not have a special meaning in computer science, at least not one that I know of.  Q Well, what does the phrase "diary of a person or entity's electronic life" mean?  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, but I know colleagues of mine who do which little bit is a thing about the notion of because it is in the context of this  A Looking at the specification of the patent, I think that this is referring to the things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER  1 STEPHEN FEINER
in computer science, at least not one that I  know of.  Well, what does the phrase "diary of a person or entity's electronic life" mean?  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, 21 computer science it's not work that I do, 25 but I know colleagues of mine who do which 17 patent, I think that this is referring to the things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER  1 STEPHEN FEINER
know of.  Q Well, what does the phrase "diary of a person or entity."  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, there are folks doing artificial life in computer science it's not work that I do, but I know colleagues of mine who do which  Page 144  STEPHEN FEINER  18 things that happen to a person or an entity.  An entity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER
Q Well, what does the phrase "diary of a person or entity's electronic life" mean?  A If you'll permit me to elaborate a little bit, thinking in fact electronic life, there are folks doing artificial life in computer science it's not work that I do, but I know colleagues of mine who do which  Page 144  A nentity could be a corporation or it even could be a machine, for that matter. Entity is a thing.  "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER  1 STEPHEN FEINER
20 a person or entity's electronic life" mean? 21 A If you'll permit me to elaborate a 22 little bit, thinking in fact electronic life, 23 there are folks doing artificial life in 24 computer science it's not work that I do, 25 but I know colleagues of mine who do which 26 Page 144  1 STEPHEN FEINER  20 could be a machine, for that matter. Entity is a thing. 21 "Electronic life," I think, has to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER
A If you'll permit me to elaborate a 21 is a thing.  little bit, thinking in fact electronic life, 22 "Electronic life," I think, has 23 there are folks doing artificial life in 23 to do with data. And I think this is 24 computer science it's not work that I do, 24 basically talking about the notion of 25 but I know colleagues of mine who do which 25 because it is in the context of this  Page 144  Page 145  1 STEPHEN FEINER
there are folks doing artificial life in computer science it's not work that I do, but I know colleagues of mine who do which page 144  STEPHEN FEINER  23 to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER
there are folks doing artificial life in computer science it's not work that I do, but I know colleagues of mine who do which Page 144  STEPHEN FEINER  23 to do with data. And I think this is basically talking about the notion of because it is in the context of this  Page 144  STEPHEN FEINER
24 computer science it's not work that I do, 25 but I know colleagues of mine who do which  Page 144  STEPHEN FEINER  24 basically talking about the notion of because it is in the context of this  Page 145  1 STEPHEN FEINER
but I know colleagues of mine who do which  Page 144  STEPHEN FEINER  Decause it is in the context of this  Page 145  STEPHEN FEINER
1 STEPHEN FEINER 1 STEPHEN FEINER
1 4 GUOLO, I III TOTOTI III E O HIII I GO HAL ALO 1 4 AUTOHIAUDAH Y A UIAI Y OL WIIAI UIAI
3 time ordered. 3 person did physically as they walked
4 I think it's talking about a 4 around.
5 set of things ordered in time that 5 It wasn't really their
6 correspond to the history of a person 6 electronic life. At least that part of
7 who might be the user of a computer or 7 it wasn't their electronic life. It was
8 an entity that could be the computer 8 their physically moving-around life.
9 itself or it could be the corporation 9 And I'm trying to remember
the computer was involved in.   10 whether the PEPYS System, which again is
And we're talking about   11 something that people would think of
documents that, in this time-ordered   12 when they heard the word "diary," also
sequence, document the history of that   13 included documentation of things that
person or entity, as represented on the people did when they were sitting at
15 computer.   15 their computers. I don't remember
As one of ordinary skill in the 16 offhand right now whether it did.
art who is also familiar with work like 17 But you asked me about the
that done by William Newman and Mik 18 meaning of "diary of a person or an
that done by William Newman and Mik 18 meaning of "diary of a person or an Lamming and colleagues on systems like 19 entity's electronic life." And I'm
that done by William Newman and Mik  Lamming and colleagues on systems like  PEPYS, which is a rank EuroPARC system  meaning of "diary of a person or an  entity's electronic life." And I'm  trying to think of things that, to a
that done by William Newman and Mik  Lamming and colleagues on systems like  Lamming and colleagues on systems like  PEPYS, which is a rank EuroPARC system  that uses what we call Active Badges,  that uses what we call Active Badges,  meaning of "diary of a person or an entity's electronic life." And I'm trying to think of things that, to a person of ordinary skill in the art,
that done by William Newman and Mik Lamming and colleagues on systems like PEPYS, which is a rank EuroPARC system that uses what we call Active Badges, which could track a person's location as  meaning of "diary of a person or an entity's electronic life." And I'm trying to think of things that, to a person of ordinary skill in the art, would resonate through that phrase.
that done by William Newman and Mik Lamming and colleagues on systems like PEPYS, which is a rank EuroPARC system that uses what we call Active Badges, which could track a person's location as they went around their organization to  lamming of "diary of a person or an entity's electronic life." And I'm trying to think of things that, to a person of ordinary skill in the art, would resonate through that phrase.  Q Did Mirror Worlds' patents relate to
that done by William Newman and Mik Lamming and colleagues on systems like PEPYS, which is a rank EuroPARC system that uses what we call Active Badges, which could track a person's location as  meaning of "diary of a person or an entity's electronic life." And I'm trying to think of things that, to a person of ordinary skill in the art, would resonate through that phrase.

	Page 146		Page 147
-	STEPHEN FEINER	1	STEPHEN FEINER
1	"relate to."	2	or entity's electronic life?
2		3	A If you told me something was a diary
3	The PEPYS System certainly		of a person's electronic life and it
4	created and, I believe, sent to the user	4	contained no information at all about that
5	by e-mail on a daily basis a diary of	5	
6	what that person did, time ordered	6	person and things that they did when they
7	chronologically.	7	were doing stuff electronically, then I would
8	So in some sense, I guess	8	claim it was a diary of their life, I guess,
9	insofar as there's a lot of discussion	9	is an easy answer.
10	of things that are ordered by time, you	10	So this is not a diary of my
11		11	life. This is not a dairy of my life.
12		12	MR. STEIN: Excuse me. He pointed
13	But "relationship" is a kind of	13	to his can of Coke and a document
14	loose, general word. I don't think it	14	sitting next to him.
15	has a very specific meaning. So I'm not	15	A A can of Coke is not a diary of my
16	sure what you mean by, "relate to."	16	life.
17	I'm just keying on that because	17	The term "diary," in fact,
18	you asked me about the word "diary."	18	comes from a group having to do with
19	And one thing that pops into my mind	19	time. "Day," I believe, is part of the
20	when I hear "diary" is that particular	20	root.
21	system, which is designed to create kind	21	And so a diary would usually be
22	of an electronic automatically-	22	something that was time ordered. And so
23	constructed diary of a person's life.	23	I would expect something that was a
24	Q How do you know whether something is	24	diary of my life, electronic or
25	or is not functioning as a diary of a person	25	otherwise, would be time ordered.
		1	
	Page 148		Page 149
1	Page 148 STEPHEN FEINER	1	
1	STEPHEN FEINER	1 2	Page 149 STEPHEN FEINER
1 2 3	STEPHEN FEINER That's the conventional facts		Page 149
2	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I	2	Page 149 STEPHEN FEINER And even then, it probably isn't totally
2 3 4	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly	2 3	Page 149 STEPHEN FEINER And even then, it probably isn't totally complete. I don't know if there are
2 3 4 5	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less	2 3 4	Page 149 STEPHEN FEINER And even then, it probably isn't totally complete. I don't know if there are standards for something that would be
2 3 4 5 6	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often.	2 3 4 5	STEPHEN FEINER And even then, it probably isn't totally complete. I don't know if there are standards for something that would be complete.
2 3 4 5 6 7	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an	2 3 4 5 6	STEPHEN FEINER And even then, it probably isn't totally complete. I don't know if there are standards for something that would be complete. I know that certainly within
2 3 4 5 6 7 8	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a	2 3 4 5 6 7	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the
2 3 4 5 6 7 8	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be	2 3 4 5 6 7	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that
2 3 4 5 6 7 8 9	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered.	2 3 4 5 6 7 8	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which
2 3 4 5 6 7 8 9 10	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've	2 3 4 5 6 7 8 9	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.
2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll	2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an
2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were	2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an electronic life would be something time	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to to determine whether something is or is
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an electronic life would be something time ordered. It would probably be something	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to to determine whether something is or is not functioning as a diary of a person
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an electronic life would be something time ordered. It would probably be something complete.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to to determine whether something is or is not functioning as a diary of a person or entity's electronic life?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an electronic life would be something time ordered. It would probably be something complete. But on the other hand, does a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to to determine whether something is or is not functioning as a diary of a person or entity's electronic life?  A So I'd want to know about the things
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an electronic life would be something time ordered. It would probably be something complete. But on the other hand, does a diary have to be complete? I think most	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to to determine whether something is or is not functioning as a diary of a person or entity's electronic life?  A So I'd want to know about the things that were in that time-ordered sequence or
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an electronic life would be something time ordered. It would probably be something complete. But on the other hand, does a diary have to be complete? I think most people's diaries certainly aren't	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to to determine whether something is or is not functioning as a diary of a person or entity's electronic life?  A So I'd want to know about the things that were in that time-ordered sequence or things that were in the diary. Were they
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER That's the conventional facts of a noncomputational diary where I allowed an entry, you know, possibly every day, maybe more often, maybe less often. So I think a diary of an electronic life again, this is not a term of the art would probably be capitally ordered. This is not something I've thought about very carefully. So you'll have to forgive me if I say things that I might, when retrospectively and more carefully, I would have to say were spoken too hastily. But I think a diary of an electronic life would be something time ordered. It would probably be something complete. But on the other hand, does a diary have to be complete? I think most	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER And even then, it probably isn't totally complete.  I don't know if there are standards for something that would be complete.  I know that certainly within the context of the patents and the disagreements about the patents, that there is some notion of, you know, which items are actually part of a stream.  Q Are there any other characteristics that you would look to to determine whether something is or is not functioning as an electronic diary? Strike that.  Are there any other characteristics that you would look to to determine whether something is or is not functioning as a diary of a person or entity's electronic life?  A So I'd want to know about the things that were in that time-ordered sequence or

1 2 3	Page 150		Page 151
2 3	STEPHEN FEINER	1	STEPHEN FEINER
3	or person?	2	which it says, "A stream, according to
	So I would expect the things in	3	the present invention, is a time-ordered
4	there to be related to the thing that it	4	sequence of documents that functions as
5	is a diary of. If there were things	5	a diary of a person or an entity's
6	that were not related, then I think they	6	electronic life. Every document created
7	would not be the right things to have in	7	and every document send," with a 'D," to
8	a diary, per se.	8	a person or entity is stored in the main
9	I'm trying to think of whether	9	stream."
	this would mean that the diary would	10	Q And where are you reading from?
10 11	•	11	A I'm reading from the '227 Patent
	have to be complete. I'm not sure about	12	
12	that.	1	Specification, Column 4, starting on Line 6,
13	$\mathcal{S}$	13	although this is probably a little bit later
14	1 11 /	14	than that, since the part that begins, "A
15	<b>3</b>	15	stream, according to the present invention,"
16	a person or an entity's electronic life"	16	is at Line 6 Column 4."
17	by itself, meant.	17	And you should turn to the copy
18	And as I said, I chose that	18	that is appended to my
19	phrase not because I invented it myself,	19	Q Just so the record is clear, you
20	but because it was actually found in the	20	were reading from your declaration at Page 5?
21	patent specification.	21	A I was reading from my declaration
22	And in fact, looking now at	22	page 5. And now I'm about to actually turn
23	that portion of the specification or at	23	to the specification of the '227 patent,
24	least the portion I quoted of it, that	24	Column 4, to make sure that I get the line
25	is followed by additional writing in	25	numbers right.
	Page 152		Page 153
1	STEPHEN FEINER	1	STEPHEN FEINER
2	And looking at Column 4,	2	compounded and composed together with
3	beginning with Line 6, there is a chunk	3	material from Columns 5 through 6 of the
4	of that specification that I quoted in	4	patent, which also talks about past,
5	my report between Line 6 and Line 30	5	present and future, led me to conclude
6	that gives more information about that	6	the portion of my definition of 'stream'
7	first sentence, part of which I used in	7	that refers to the past, present and
8	the construction.	8	future.
9	So it is, in fact, that	9	Q You used the term "patents-in-suit"
10	material following the part that I used	10	in Mirror Worlds' patents in the past
11	in my construction that helps me	11	testimony.
12	understand what's meant by the terms	12	Is your understanding of those
13	that are used in the construction.	13	terms the patents that are attached as
14	And there it says, "Every	14	Exhibits B, C, D and E of your
1	document created and every document send	15	declaration?
117	to a person or entity is stored in the	16	A When I use that term, I'm referring
15 16	main stream," so it's indicating some	17	to the ones attached as B, C, D and E. And
16	notion of completeness.	18	those are the ones, at the time of preparing
16 17	nonon or completelless.	1-0	mose are me ones, at me ame or proparing
16 17 18		19	the report that Lunderstood to be involved
16 17 18 19	It's all documents created by	19 20	the report, that I understood to be involved in the work that I am doing
16 17 18 19 20	It's all documents created by the person or entity. All the documents	20	in the work that I am doing.
16 17 18 19 20 21	It's all documents created by the person or entity. All the documents that were sent to the person or entity	20 21	in the work that I am doing.  Q And are you familiar with the
16 17 18 19 20 21	It's all documents created by the person or entity. All the documents that were sent to the person or entity are all in a main stream.	20 21 22	in the work that I am doing.  Q And are you familiar with the patents-in-suit?
16 17 18 19 20 21 22	It's all documents created by the person or entity. All the documents that were sent to the person or entity are all in a main stream. And this, in part, also talking	20 21 22 23	in the work that I am doing.  Q And are you familiar with the patents-in-suit?  A I'm not sure what you mean by
16 17 18 19 20 21	It's all documents created by the person or entity. All the documents that were sent to the person or entity are all in a main stream.	20 21 22	in the work that I am doing.  Q And are you familiar with the patents-in-suit?

	Do 22 150		Page 159
	Page 158		
1	STEPHEN FEINER	1	STEPHEN FEINER
2	the spec that I quote on my Page 5, it's	2	future at which a document can be
3	talked about in the patent in Columns 5	3	placed that isn't the current time, but
4	and 6 of the '227 patent specification.	4	rather, a time into the future. And
5	And if I look at those columns	5	that is clearly a property of a stream.
6	to refresh my memory, I'm now looking at	6	Q Is there a notion in the term
7	Line 55 in Column 5, where it talks	7	"stream" that the time ordering of the
8	about "the timepoint in the stream where	8	documents in the stream is maintained?
9	new documents are created and where	9	A I'm not sure what you mean by that.
10	incoming documents are placed." And so	10	Q Is the time ordering of the
11	this is in the present portion.	11	documents in the stream maintained?
12	And looking a little bit later	12	MR. BROWN: Objection.
13	over here, in Column 6, starting at	13	A Did you mean, does the system
14	Line 2, it says, "The system allows you	14	maintain that time ordering? Does the system
15	to dial to the future by selecting a	15	keep that time ordering or remember that time
16	future timepoint for a document. The	16	ordering; is that what you meant?
17	present invention keeps the document	17	Q Yes.
18	until that future time occurs. When the	18	A Looking at the specification on
19	time of a document's timepoint arrives,	19	Column 6, Line 3, "The present invention
20	the reminder document is brought into	20	keeps" I'm sorry, I think I have it wrong.
21	view and the document enters the present	21	One second.
22	portion of the stream."	22	Looking at the specification on
23	So there's this notion of a	23	Column 4, Line 26, it says, "The stream
24	timepoint that the user can set they	24	preserves the order and method of
25	refer to it as dialing into the	25	document creation."
		I	
	Page 160		Page 161
1		1	
1 2	STEPHEN FEINER	1 2	STEPHEN FEINER
2	STEPHEN FEINER So I think saying that the	2	STEPHEN FEINER ten-days-from-now timestamp at a future
2	STEPHEN FEINER So I think saying that the stream preserves the order of document	2 3	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at
2 3 4	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it	2 3 4	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's
2 3 4 5	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty	2 3 4 5	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.
2 3 4 5 6	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.	2 3 4 5 6	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the
2 3 4 5 6 7	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the	2 3 4 5 6 7	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or
2 3 4 5 6 7 8	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is	2 3 4 5 6 7 8	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now. Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct
2 3 4 5 6 7 8	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?	2 3 4 5 6 7 8	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now. Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the
2 3 4 5 6 7 8 9	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a	2 3 4 5 6 7 8 9	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the
2 3 4 5 6 7 8 9 10 11	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding	2 3 4 5 6 7 8 9 10	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now. Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of
2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that	2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered	2 3 4 5 6 7 8 9 10	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?
2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time,"	2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the	2 3 4 5 6 7 8 9 10 11 12 13 14	STEPHEN FEINER ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER  ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer knows it, or possibly the manipulated	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	stephen feiner ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use some mechanism which, as time changes,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer knows it, or possibly the manipulated time, manipulated using the timepoint	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	stephen feiner ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use some mechanism which, as time changes, you need to actually move a document
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer knows it, or possibly the manipulated time, manipulated using the timepoint that the stream supports that allows a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	stephen feiner ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use some mechanism which, as time changes, you need to actually move a document from one place to another. You move it
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer knows it, or possibly the manipulated time, manipulated using the timepoint that the stream supports that allows a user to create a document with a future	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	stephen feiner ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use some mechanism which, as time changes, you need to actually move a document from one place to another. You move it from a present portion to a past
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer knows it, or possibly the manipulated time, manipulated using the timepoint that the stream supports that allows a user to create a document with a future time.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	stephen feiner ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use some mechanism which, as time changes, you need to actually move a document from one place to another. You move it from a present portion to a past portion, for example.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer knows it, or possibly the manipulated time, manipulated using the timepoint that the stream supports that allows a user to create a document with a future time.  So if you created a document	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	stephen feiner ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use some mechanism which, as time changes, you need to actually move a document from one place to another. You move it from a present portion to a past portion, for example.  Q Are you saying that that's not
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER So I think saying that the stream preserves the order of document creation would indicate that it maintains that order. They say pretty much the same thing.  Q And when a document is added to the stream at a particular timepoint, it is included in the time order at that timepoint?  A When a document is added at a particular timepoint, it is my understanding that it is included in the order at that timepoint because a stream is a time-ordered sequence.  I think when it says "time," it's referring to the time as either the actual time, as far as the computer knows it, or possibly the manipulated time, manipulated using the timepoint that the stream supports that allows a user to create a document with a future time.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	stephen feiner ten-days-from-now timestamp at a future point in the stream, as opposed to at the point in the regular computer's clock time that's right now.  Q Is it your understanding that the software that implements a stream has or maintains three separate and distinct entities? One being the past portion of the stream, one being the current portion of the stream and one being the future portion of the stream?  A It depends on what you mean by "separate and distinct."  I think there is a distinction between past, present and future. And I don't think that the system needs to use some mechanism which, as time changes, you need to actually move a document from one place to another. You move it from a present portion to a past portion, for example.

Page 178 Page 179 1 STEPHEN FEINER 1 STEPHEN FEINER 2 create new levels of hierarchy, creates a 2 to a directory whose iconic representation 3 you see on the screen, that would mean that 3 folder within one of those folders and place documents inside of it, can then move the 4 that command could be satisfied in many 4 5 documents individually within and between 5 operating systems by selecting and dragging folders and also can move the folders 6 6 that representation of that file into the 7 7 themselves both within and between folders. folder. 8 8 And this is a venerable aspect And that would make it so that 9 9 of operating systems both in terms of you would access it, if you were working 10 the user interfaces that they present, 10 from the top of the directory hierarchy and as well in terms of the way in down, by descending that qualified named 11 11 12 hierarchy to go from the very top down 12 which, at a low level, a program of the to the place in which you had just put 13 operating system calls, the files are 13 represented and manipulated. 14 14 Folders and directories are the same 15 15 When you say, "What does it 16 16 mean to store it there," that doesn't thing, correct? I'm using "folder" and "directory" 17 17 necessarily mean, in an efficient 18 to mean the same thing. 18 implementation, that the actual bits 19 What does it mean to store a file in 19 within the file were moved. 20 They may not be moved on the 20 a directory? 21 21 There are several different ways of disk. They may not be moved in a 22 interpreting that term. If you said to 22 variety other places in the software, someone, for example, "Store that file in 23 but some portion of the data structures 23 24 that directory," pointing to a file, let's 24 representing that directory hierarchy 25 would be modified to indicate the new 25 say, that you see on the screen, and pointing Page 180 Page 181 STEPHEN FEINER 1 STEPHEN FEINER 1 2 representation of data, typically 2 location, so to speak, of a new way to 3 access that file. 3 represented as bits, sometimes organized And you just mentioned, "a data 4 into bytes and words and strings, which 4 structure representing a directory." 5 stores information and which typically 5 6 is created and manipulated by means of 6 What did you mean by that? 7 That in the operating system, there 7 software. And that software embodies 8 8 are data structures at different parts of the algorithms. 9 EVENING SESSION 9 operating system, including ones that are 10 used to manipulate the graphical 10 (6:00 p.m.) 11 STEPHEN FEINER, 11 representations on the screen, all the way 12 12 down to very low-level ones that are used to resumed, having been previously 13 duly sworn, was examined 13 represent what's actually on the disk and 14 and testified further as follows: 14 ultimately where things are on the disks 15 15 whenever the place in which the file was CONTINUED EXAMINATION BY MR. STEIN: 16 16 being stored. And indeed, there may be Can there be two data structures places that aren't yet written to disk. 17 17 that point to the same document on disk? 18 18 And this very potentially It depends on what you mean by, "two 19 19 complex set of data structures data structures point to go the same 20 document." 20 determines where things are said to be 21 within the operating system. 21 I can certainly write a piece 22 22 And what is a data structure? of code for you right now in which two "Data structure" is a fundamental 23 data structures point to the same 23 24 term of the art in computer science. 24 document. 25 25 And on the bottom of Page 4, what And it refers to a

Page 186 Page 187 STEPHEN FEINER STEPHEN FEINER 1 1 2 Α Yes, I could. 2 context of the patents, as opposed to an 3 3 So why can't it treat the documents ordinary meaning in the context of stored in the stream the same way that a 4 computer science, correct? 4 5 conventional operating system creates 5 Α That's correct. 6 What is the ordinary meaning of 6 documents stored in a directory or a 7 7 "main stream" in the context of computer subdirectory? 8 8 I'm confused, because a conventional science? 9 9 operating system needs to store the documents A Good point. I don't think there is 10 10 and not just the higher-level things that an ordinary meaning. So it says here that it kind of give you access to them. 11 has a specific meaning, as opposed to an 11 I think I answered your 12 ordinary meaning. It doesn't say, "the 12 ordinary meaning." I don't think there is an 13 question correctly, but I'm not sure 13 14 what you're getting at. 14 ordinary meaning in the context of computer 15 15 MR. STEIN: Let's take a break. science. 16 (A brief recess was 16 The only one I could possibly 17 17 think of -- and this is off the top of taken.) 18 my head -- is only that he was doing 18 BY MR. STEIN: 19 Can you could turn to Page 6, under 19 main stream research. O 20 20 subheading B? I would think that he was not 21 21 Are you talking about my report? doing anything particularly different 22 O Of your report, yes. 22 from other people who were doing it. So 23 You say in the last sentence of 23 it's not any different from the way in 24 the first paragraph that the term "main 24 which you would use the term "main 25 25 stream" in any other art. stream" had a specific meaning in the Page 188 Page 189 1 STEPHEN FEINER 1 STEPHEN FEINER units" -- sorry, strike that. 2 You were just handed Exhibit 6, 2 3 which is a copy of US Patent 3 Exhibit 6, Column 15, Line 12 states, "The main stream for receiving 4 Number 6,006,227. It's the same as Exhibit D 4 5 to your declaration or report. each data unit received by or generated 5 I'm looking for it right now and 6 by the computer system" --6 7 making sure that all the pages are there. 7 A Hold on a second. Which line again, 8 8 It is a copy of the '227 please? 9 9 patent. Q Twelve. It starts, "The main stream 10 So looking back at Page 6 of your 10 for receiving each data unit received by or 11 generated by the computer system," correct? 11 report and that sentence we just referred to, you state that, "A person of ordinary skill 12 12 Α 13 would understand that the phrase 'main 13 Why did you change the word "each" stream' in the Mirror Worlds patents refers 14 to "every" in your report regarding the term 14 15 "main stream"? 15 to 'a stream that stores every document 16 16 received by or generated by a computer Because I looked not only at the 17 system." 17 claims, but I also looked at the 18 specification, where there are a number of 18 Do you see that? 19 19 Yes, I do. places that talk about the main stream. If you look at Exhibit 6, Claim 1, 20 And looking, for example, at 20 21 in Line 11, it says ---21 Column 4, Line 8, I see, "Every document 22 22 Hold on one second, please. created and every document send to a 23 Claim 1, Line 11, Column 15? 23 person or entity is stored in a main 24 Correct. 24 stream." 25 25 It says, "A main stream of data Is there a difference between using

	Page 190		Page 191
1	STEPHEN FEINER	1	STEPHEN FEINER
2	the word "each" and the word "every"?	2	actually trying to make that
3	A It depends on the context in which	3	determination it seems to me that if
4	the words are used.	4	I simply replace "each" in both places
5	I think people often use the	5	that it appears or in the first element
6	words for connotations, as well as	6	or in only the first place
7	denotations. And I think that the	7	Q Where it says, "The main stream for
8	statement made in Column 4 is a very	8	receiving each data unit received by or
9	strong one. It repeats the word	9	generated by the computer system," the "each"
10	"every."	10	in that phrase.
11		11	A Right.
12		12	Again, just thinking about it
13		13	right now and not having thought about
14	that they were trying to make very clear	14	it carefully before, I think it's less
15	the inclusiveness that every document	15	emphatic than "every." And clearly,
16	created and every document sent to a	16	it's the term used in the claim.
17	person was to be stored in the main	17	And so if it is for "receiving
18	stream.	18	each data unit received by or generated
19	Q So in your view, would that language	19	by," I'm just trying to be careful,
20	in Claim 1 have a different connotation if	20	thinking about phrases like "each" and
21	the word "every" was used instead of "each"?	21	"every," which is really used to hammer
22	A I would need to look at it carefully	22	home "all."
23	to figure out how I feel about that.	23	To be really careful, I would
24	So looking at it right now	24	need to think a bit more about it.
25	and again, this is the first time I'm	25	Q So without thinking more about it,
	Page 192		
1	rage 172		Page 193
1		1	Page 193
1	STEPHEN FEINER	1	STEPHEN FEINER
2	STEPHEN FEINER you don't know right now if using "each"	2	STEPHEN FEINER normal ability to refer to a file
2 3	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have	2	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name
2 3 4	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?	2 3 4	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of
2 3 4 5	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations? A I don't know.	2 3 4 5	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular
2 3 4	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations? A I don't know. Q If you look at the next term on	2 3 4	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name
2 3 4 5 6 7	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations? A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state	2 3 4 5 6 7	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.
2 3 4 5 6 7 8	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value	2 3 4 5 6 7 8	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the
2 3 4 5 6 7 8	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document,"	2 3 4 5 6 7 8 9	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the
2 3 4 5 6 7 8 9	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?	2 3 4 5 6 7 8 9	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that
2 3 4 5 6 7 8 9 10	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct? A Yes.	2 3 4 5 6 7 8 9 10	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able
2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion	2 3 4 5 6 7 8 9 10 11	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and	2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value? A I said that the timestamp must	2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document. And my basis for saying that it	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.  And my basis for saying that it must uniquely identify each document is	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it very clear that that must be the case. Let me find some of those
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.  And my basis for saying that it must uniquely identify each document is based on a variety of things, including	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it very clear that that must be the case.  Let me find some of those places.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.  And my basis for saying that it must uniquely identify each document is based on a variety of things, including parts of the file history, and as well	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it very clear that that must be the case.  Let me find some of those places.  Q Is it your opinion that the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.  And my basis for saying that it must uniquely identify each document is based on a variety of things, including parts of the file history, and as well also the specification, in which it	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it very clear that that must be the case.  Let me find some of those places.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.  And my basis for saying that it must uniquely identify each document is based on a variety of things, including parts of the file history, and as well also the specification, in which it tells us that file names are strictly	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it very clear that that must be the case.  Let me find some of those places.  Q Is it your opinion that the timestamp must be a unique date and time value?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.  And my basis for saying that it must uniquely identify each document is based on a variety of things, including parts of the file history, and as well also the specification, in which it tells us that file names are strictly optional.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it very clear that that must be the case.  Let me find some of those places.  Q Is it your opinion that the timestamp must be a unique date and time value?  MR. BROWN: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER you don't know right now if using "each" versus "every" in that phrase would have different connotations?  A I don't know. Q If you look at the next term on Page 7, Section C, of your report, you state that, "A timestamp is a date and time value that uniquely identifies each document," correct?  A Yes. Q What is the basis for your opinion that the timestamp must be a unique date and time value?  A I said that the timestamp must uniquely identify each document.  And my basis for saying that it must uniquely identify each document is based on a variety of things, including parts of the file history, and as well also the specification, in which it tells us that file names are strictly	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER normal ability to refer to a file specifically by a fully-qualified name starting at the group or by means of once it established a particular directory that its in by its unique name in that directory.  And given that, since it's the nature of the operating systems and the way in which one manipulates files that there needs to be some way of being able to refer unambiguously to a file, this seems to be the only thing left to do that.  And as I said, there are many places where the specification makes it very clear that that must be the case.  Let me find some of those places.  Q Is it your opinion that the timestamp must be a unique date and time value?  MR. BROWN: Objection.

			***************************************
	Page 194		Page 195
1	STEPHEN FEINER	1	STEPHEN FEINER
2	and time that uniquely identifies each	2	Q Does it have to be a unique date and
3	document."	3	time value?
4	And in my description of	4	A I think that the date and time, if
5	possible ways later on that one might	5	you're referring to the actual clock date and
6	implement a timestamp that uniquely	6	time in a functioning of limitation in which
7	identifies a document, I mentioned the	7	two things could be done at the same time,
8	use of additional data in the form, for	8	that clearly would not uniquely identify a
9	example, of a counter, let's say, that	9	document.
10	could be used to be sure that something	10	And therefore, something would
11	received a unique timestamp even if it	11	need to get done to create a timestamp
12	was being created at the exact same time	12	that identifies documents uniquely to be
13		13	able to make sure that that timestamp
14	else.	14	wasn't going to ambiguously be given to
15	Q So is it your opinion that a	15	more than one document.
16		16	Q Then is the answer to my previous
17	and time value?	17	question "no"?
18	MR. BROWN: Objection.	18	MR. BROWN: Objection.
19	A In the context of the patent?	19	A Could you ask the question again?
20	Q Yes.	20	Q Does a stamp time need to be a
21		21	unique date and time value?
22		22	MR. BROWN: Objection.
23		23	A It depends on what you mean by, "a
24	•	24	unique date and time value." That's not what
25	received the same timestamp.	25	I said over here.
	Page 196		Page 197
1	STEPHEN FEINER	1	STEPHEN FEINER
2	One way to create a timestamp	2	possibility of additional information
3	would be that either you make sure you	3	beyond the date and time?
4	could not somehow make two things or	4	A I was including the possibility of
5	receive two things at the same time, in	5	additional information beyond the date and
6	which case you should also make sure	6	time, and so I'm qualifying value with date
7	that a person having set the time into	7	and time. Because clearly, the timestamp
8	the future couldn't set it to the exact	8	needs to actually indicate time and date
9	same time again.	9	somehow.
10		10	But to make it unique, you
11		11	would either have to ensure that you're
12		12	never allowed to use that date and time
13		13	again once you've used it, which it
14	•	14	seems to me
15		15	For example, if I time tripped
16		16	into the future and I set the date and
17		17	time to a particular date and time, and
18	,	18	then I went back in the past, or if I
19	1	19	time tripped into the future and set the
20		20	date and time to a particular date and
21		21	time and then set it again to the same
22		22	date and time, and I created one thing
23		23	after setting it the first time and
24	, 1	24	created a second document after setting
i i		25	it the second time, and the system then
25	document, you were including the	2	it the second time, and the system then

cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not sure what you mean by connection with this case by Apple, correct?  14 ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means.  Q Have you done any work in archiving or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q You've been retained as an expert in connection with this case by Apple, correct?		Page 198		Page 199
proceeded to give both of those things the exact same timestamp, that would be problematic.  And so the date and time value would need to have something else. For example, maybe an artificial extension of the time or maybe, as I discussed, the use of some kind of counter in there to be able to distinguish between the two date and time values that, as a user, I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both cases, in one case before creating a document, and in the second case before creating another document. And the system would need to make sure that though the two documents did not have the system would need to make sure that thing about several different possible approaches that someone might do  STEPHEN FEINER And as I said, you could imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, only one document, for whatever reason, created during that period of time, or created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving? A I muntous that you mean by "expert." Q Pyou've been retained as an expert in constinct in the are a number of subdetics, which that time are a number of subdetics, which that single document.  And as tell, 10 foc ourse wasn't being exhaustive in described be wasn't would be indicate a particular document created two weeks ago, does the user back to know the stimestamp assigned to that document in order timestamp assigned to that document in order timestamp assigned to that document in order timestamp assigned to that document or the timestamp assigned to that document or the timestamp assi	1	STEPHEN FEINER	1	STEPHEN FEINER
the exact same timestampt, that would be problematic.  And so the date and time value would need to have something else. For example, maybe an artificial extension of the time or maybe, as I discussed, the use of some kind of counter in there to be able to distinguish between the to be able to distinguish between the two date and time values that, as a user, I might have only specified the exact same name in each case.  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both exact same name in each case.  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both exact same name in each case.  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both exact same name in each case.  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both exact same name in each case.  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both exact same name in each case.  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both exact same name in each case.  I might have said, "Tomorrow at exact same name in each case.  I might have said, "Tomorrow at exact same name in each case.  I might have said, "Tomorrow at exact same name in each case.  I might have said, "Tomorrow at exact same name in each case.  I might have said, "Tomorrow at the exact same name in each case.  I a sex particular document created two weeks ago, does the user have to know the time stamp sastigned to that document inderent olicate the document?  A The user ineeds to know what specific example - Verie talking about at time-based search. And I don't think the user needs to know that.  I think I discussed in my report.  A The user ineeds to know what specific example - Verie talking about at time-based search. And I don't think the user needs to know that.  I think I discussed in my report.  A The user ineed to know that timestamp. I don't see anything indicating that they would need to know that that sea anything indicating that they would need to know that that se		· · · · · · · · · · · · · · · · · · ·		t in the second
here are a number of subtleties, which And so the date and time value would need to have something else. For example, maybe an artificial extension of the time or maybe, as I discussed, the use of some kind of counter in there to to be able to distinguish between the two date and time values that, as a user, I might have only specified the exact same name in each case. I might have only specified the exact same name in each case. I might have said, "Tomorrow at example maybe and in the second case before creating another document. And the system would need to make sure that those two documents did not have the same timestamp.  And you'll appreciate that I spent some time later on in the document talking about several different possible approaches that someone might do  Page 200  STEPHEN FEINER And as I said, you could imagine an example in which, because there weren't a lot of documents, for whatever reason, created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to again more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving? A In not sure what you mean by  "expert."  Q You've been retained as an expert in Q You've been retained as an expert in Q You've been retained as an expert in control this case by Apple, cornect?  Here are a number of subtlet wind which is diseased in my report.  And as well, I of course in dwhich the discussed the which that we discussed the which that we discussed two which and time eliase stanged to the document in order to locate the document?  A The user in that specific example?  Q Yes.  A The user in that Specific example?  Q Yes.  The the tamestine has user have to know the timestampassigned to that document in order to locate th	ł			
And so the date and time value would need to have something else. For example, maybe an artificial extension of the time or maybe, as I discussed, the use of some kind of counter in there to be able to distinguish between the to be able to distinguish between the user, I might have only specified the exact same name in each case.  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both exact same name in each case before creating a document, and in the second case before creating another document. And the system would need to make sure that those two documents did not have the same timestamp.  And you'll appreciate that I spent some time later on in the document talking about several different possible approaches that someone might do  Page 200  Page 201  STEPHEN FEINER  And as I said, you could imagine an example in which, because there weren'a la tof of documents created over that time, if there were like, say, only one document, for whatever reason, created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more consider yourself an expert in archiving?  A Than ot sure what you mean by "expert."  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving? and conceits on this case by Apple, cornect?  A Than not sure what you mean by "expert."  Sand as a well, 1 of course wasn't being exhaustive in described how a user which the doen.  And swell locate a particular document created two would locate the document?  A The user in that specific example?  A The user in that specific example?  A The user in that specific example.  A The user in that specific example?  A The user in that specific example and the time stanch in order to know that it wow exa search. And I don't think the user needs to know th		<del>-</del>		
would need to have something else. For cample, maybe an artificial extension of the time or maybe, as I discussed, the use of some kind of counter in there to be able to distinguish between the too be able to distinguish between the two date and time values that, as a law the word of the time or maybe, as I discussed, the use of some kind of counter in there to be able to distinguish between the two date and time values that, as a law two date and time values that, as a law two date and time values that, as a law two date and time values that, as a law two date and time values that, as a law two date and time values that, as a law two date and time values that as a law two date and time as a particular does the know that the time stamp assigned to that document in order to locate the document in order to locate the document?  I was that a law that document and in the secand case and the time stamp assigned to that document in order to locate the document?  I was that a law that document and in the secand sand as the time stamp assigned to that document in order to locate the document?  I was that a law that the document and the time stamp assigned to that document to the time stamp assigned to that document				
of the time or maybe, as I discussed, the use of some kind of counter in there to be able to distinguish between the to be able to distinguish between the user, I might have said, "Tomorrow at exact same name in each case. I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both cases, in one case before creating a document, and in the second case before reating another document. And the system would need to make sure that document, and in the second case before reating another document. And the system would need to make sure that document, and in the second case before reating another document. And the system would need to make sure that system would need to make sure that flose two documents did not have the system would need to make sure that document, and in the second case before reating another document. And the system would need to make sure that system would need to make sure that system would need to make sure that document, and in the second case before reating another document at those two documents did not have the system would need to that document in the olocate the document?  A The user needs to know what specific example? A The user needs to know what specific example — we're talking about a time-based search. And I don't think the user needs to know exact bits in the timestamp. I don't see anything indicating that they would need to know that talking about several different possible approaches that someone might do  Page 200  STEPHEN FEINER And as I said, you could imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, only one document, for whatever reason, only	i			
of the time or maybe, as I discussed, be the use of some kind of counter in there to be able to distinguish between the two date and time values that, as a lawer, I might have only specified the aser, I might have only specified the exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at exact same name in each case.  I might have suid, "Tomorrow at to locate the document?  A The user needs to know what specific example?  Q Yes.  A The user needs to know what specific example — we're talking about a time-based search. And I don't think the user needs to know what the search to know that.  I think in that case, they need to know both the was created.  I think in that case, they need to know both the was created.  I think in that case, they need to know both the was created.  I think in that case, they need to know both the was created.  I think in that case, they need to know both the was created.  I think in that case, they need to know both the was created.  I think in that case, they need to know both the was created.  Q Do you have an understanding of what it means to be an				
the use of some kind of counter in there to be able to distinguish between the to to be able to distinguish between the to to be date to distinguish between the to to be able to distinguish between the to to be able to distinguish between the to to be able to gain more than the total between the to to be able to gain more than counsed. The there were the document, and in the second case before creating and document, and in the second case before creating and document, and in the second case before creating another document. And the though the same timestamp. So those two documents did not have the some time later on in the document that I spent some time later on in the document approaches that someone might do so ver that time, if there were like, say, only one document, for whatever reason, only one document. The maybe they would find that single document.  If they found multiple ones, the streen to be able to gain more to the screen to be able to gain more consider yourself an expert in archiving?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know what specific example?  A The user needs to know that user needs to know exact bits in the imestamp. I don't sink the user needs to know the streen to had				
to be able to distinguish between the two date and time values that, as a lil user, Imight have only specified the exact same name in each case.  I might have said, "Tomorrow at leaves and the exactly 4:10 p.m. Eastern time," in both cases, in one case before creating a lof document, and in the second case before creating another document. And the cases, in one case before creating a lof document, and in the second case before creating another document. And the system would need to make sure that those two documents did not have the same timestamp.  21	1			į.
two date and time values that, as a user, I might have only specified the user, I might have only specified the acaset same name in each case.  I might have said, "Tomorrow at 14 two weeks ago, does the user have to know the timestamp assigned to that document in order to locate the document?  A The user in that specific example?  A The user in that specific example?  Q Yes.  A The user in that specific example?  Q Yes.  A The user in that specific example?  Q Yes.  A The user in that specific example?  Q Yes.  A The user in that specific example?  Q Yes.  A The user in that specific example?  A		· · · · · · · · · · · · · · · · · · ·		
two weeks ago, does the user have to know the timestamp assigned to that document in order to locate the document?  I might have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both 15 cases, in one case before creating a document, and in the second case before creating another document. And the 18 system would need to make sure that 19 same timestamp. 21 those two documents did not have the 22 those two documents did not have the 23 spent some time later on in the document talking about several different possible 24 talking about several different possible 25 approaches that someone might do 25 suppreaches that someone might do 25 suppreaches that someone might do 25 suppreaches that suppread to that document was created.  Page 200  1 STEPHEN FEINER And as I said, you could imagine an example in which, because 4 there weren't a lot of documents created 4 to ver that time, if there were like, say, 50 only one document, for whatever reason, 70 created during that period of time, 80 they'd simply need to know both the 90 uper and lower bound on the time 90 uper and lower bound on the time 90 uper oid, and then maybe they would find 11 that single document. 12 If they found multiple ones, 12 the maybe they would position their cursor over the objects that they saw on 14 the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A The user in that specific example?  A The user inthat precade to know what in the ascarch.				
timestamp assigned to that document in order to locate the document?  I might have said, "Tomorrow at 14 caseatly 4:10 p.m. Eastern time," in both 15 cases, in one case before creating a 16 document, and in the second case before 17 cases, in one case before creating a 16 creating another document. And the 19 system would need to make sure that 19 system would need to make sure that 19 to those two documents did not have the 20 same timestamp. 21 same timestamp. 21 same timestamp. 22 And you'll appreciate that I 22 spent some time later on in the document 23 spent some time later on in the document 23 spent some time later on in the document 24 talking about several different possible approaches that someone might do 25 spent some time later on in the document 25 spent some time later on in the document 26 talking about several different possible approaches that someone might do 25 spent some time later on in the document 28 spent some time later on in the document 29 talking about several different possible approaches that someone might do 25 spent some time later on in the document 24 talking about several different possible approaches that someone might do 25 spent some time later on in the document 28 talking about a time-based search. And I don't think the user needs to know that. It hink the user needs to know that. It hink the user needs to know that. It hink the user needs to know that timestamp. I don't see anything indicating that they would need to know that. It hink the user needs to know that the see anything indicating that they would need to know that. It hink the user needs to know that. It hink			1	
I Imight have said, "Tomorrow at exactly 4:10 p.m. Eastern time," in both cases, in one case before creating and document, and in the second case before creating another document. And the system would need to make sure that 19 same timestamp. I don't same timestamp. I don't seam timestamp. I don't see anything indicating that they would need to know that. I think in that case, they need to know that the was created.  Think in that case, they need to know the time at which the document was created.  Think in that case, they need to know the time at which the document was created.  Think in that case, they need to know that it means to be an expert in this case?  There weren't a lot of document created over that time, if there were like, say, only one document, for whatever reason, created during that period of time, they'd simply need to know both the upper and lower bound on the time upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving?  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving or related to archiving expert."  Q You've been retained as an expert in connection with this case before take the search. And I dink I that they would need to know that.  I think in that case, they need to know that the user in the tine at which the document it in			5	
exactly 4:10 p.m. Eastern time," in both document, and in the second case before creating a document, and in the second case before creating another document. And the system would need to make sure that the same timestamp.  21				
Cases, in one case before creating a document, and in the second case before creating another document. And the casting another document. And the system would need to make sure that those two documents did not have the same timestamp.   21			5	
document, and in the second case before creating another document. And the system would need to make sure that 19 system would need to make sure that 19 search. And I don't think the user needs to those two documents did not have the same timestamp. 21 search. And I don't think the user needs to those two documents did not have the same timestamp. I don't see anything indicating that they would need to know that.  23 spent some time later on in the document talking about several different possible 24 to know that.  24 talking about several different possible 24 to know that.  25 approaches that someone might do 25  26 page 200  Page 200  Page 201  1 STEPHEN FEINER 1 STEPHEN FEINER 2 And as I said, you could imagine an example in which, because 4 there weren't a lot of documents created 4 there weren't a lot of documents created 4 over that time, if there were like, say, only one document, for whatever reason, created during that period of time, 8 they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  25 It have ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with respect to archiving?  26 A A Ste term is used in the context of the patents.  27 A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  28 A C Moving to Section D, labeled Archiving, of voyus consider yourself an expert in archiving?  29 A C Movive been retained as an expert in connection with this case by Apple, correct?  20 A You've been retained as an expert in connection with this case by Apple, correct?		<b>3</b>	•	
creating another document. And the system would need to make sure that those two documents did not have the 20 those two documents did not have the 21 same timestamp.  And you'll appreciate that I 21 see anything indicating that they would need to know that.  Step they found multiple ones, 15 then maybe they would find to know that.  STEPHEN FEINER 1 STEPHEN FEINER 2 And as I said, you could imagine an example in which, because 4 there weren't a lot of documents created over that time, if there were like, say, only one document, for whatever reason, 7 created during that period of time, 8 they'd simply need to know both the upper and lower bound on the time 10 period, and then maybe they would find 11 that single document.  If they found multiple ones, 15 then maybe they would point as cursor over the objects that they saw on the screen to be able to gain more 16 information about it and figure out which one it was.  Q Moving to Section D, labeled 19 A rehiving, or titled Archiving, of the work of the screen to be able to gain more 20 consider yourself an expert in archiving? 21 A I'm not sure what you mean by 22 "expert." 22 Q You've been retained as an expert in 24 connection with this case by Apple, correct? 25 connection with the user needs to know that the wint the user needs to know that they would need to know that. 12 connection with this case surch hat I who was created to know that they would need to know that in that case, they need to know that in that case, they need to know the time at which the document was created.  Page 200  Page 201  STEPHEN FEINER 1 STEPHEN FEINER 2 Q Do you have an understanding of what it means to be an expert in this case? A My understanding is that I need to have at least ordinary skill in	17			· · · · · · · · · · · · · · · · · · ·
system would need to make sure that those two documents did not have the same timestamp.  And you'll appreciate that I spent some time later on in the document talking about several different possible approaches that someone might do 25 approaches that someone might do 26 approaches that someone might do 27 approaches that someone might do 28 approaches that someone might do 29 approaches that someone might do 29 approaches that someone might do 29 approaches that someone might do 20 approaches that someone might do 21 approaches that someone might do 21 approaches that someone might do 25 approaches that someone might do 25 approaches that someone might do 20 approaches that someone might do 21 approaches that someone might do 21 approaches that someone might do 20 approaches that they continue approaches that they continue approaches that they can do know that it means to be an expert in this case, they need to know that it means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do approaches the to approaches the pat			(	
know exact bits in the timestamp. I don't see anything indicating that they would need to know that.  I think in that case, they need to know the time at which the document was created.  Page 200  STEPHEN FEINER  And as I said, you could imagine an example in which, because there weren't a lot of documents, for whatever reason, or created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, if then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out the screen to be able to gain more information about it and figure out expert."  And would need to know what.  STEPHEN FEINER  Q Do you have an understanding of what it means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do.  Q Do you have more than ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do.  Q Do you think you have more than ordinary skill in the art with respect to archiving?  A I'm not quite sure what that means.  Q Have you done any work in archiving or related to archiving?  A I'm not sure what you mean by  "expert."  Q Have you done any research into archiving techniques?			?	
same timestamp.  And you'll appreciate that I			5	· · · · · · · · · · · · · · · · · · ·
And you'll appreciate that I spent some time later on in the document talking about several different possible approaches that someone might do 25 approaches that single an example in which, because 3 it means to be an expert in this case? 4 A My understanding of what it means to be an expert in this case? 4 A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents. 4 Q Do you have ordinary skill in the art with respect to archiving? 4 A state term is used in the context of the patents, yes, I believe I do. 4 Q Do you think you have more than ordinary skill in the art with respect to archiving? 4 A state term is used in the context of the patents, yes, I believe I do. 4 Pin not quite sure what that means. 4 Pin not quite sure what that means. 5 Q Have you done any work in archiving or related to archiving? 4 A I'm not sure what you mean by 21 approaches that they gave on 12 approaches the provided for 12 approaches that flee you done any research into archiving techniques?				
spent some time later on in the document talking about several different possible approaches that someone might do  Page 200  Page 200  Page 201  STEPHEN FEINER  And as I said, you could imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, only one document, for whatever reason, created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, or titled Archiving, or consider yourself an expert in archiving?  Q You've been retained as an expert in 23 Q Have you done any research into archiving techniques?	1		,	
talking about several different possible approaches that someone might do  Page 200  Page 201  STEPHEN FEINER And as I said, you could imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, or created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, or vertered approaches that someone might do 24 to know the time at which the document was created.  Page 201  STEPHEN FEINER  1 STEPHEN FEINER Q Do you have an understanding of what it means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do.  Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q You've been retained as an expert in connection with this case by Apple, correct?				₽
page 200  Page 201  STEPHEN FEINER  And as I said, you could imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, only one document, for whatever reason, reated during that period of time, they'd simply need to know both the period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their the maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled A I'm not sure what you mean by  Q You've been retained as an expert in connection with this case by Apple, correct?  Page 201  Page 201  STEPHEN FEINER  Q Do you have an understanding of what it means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents.  Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	ł .		,	
Page 200  STEPHEN FEINER  And as I said, you could  imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, If they found multiple ones, If they round moult it and figure out which one it was.  Q Moving to Section D, labeled A I'm not sure what you mean by Consider yourself an expert in archiving?  A I'm not sure what you mean by Connection with this case by Apple, correct?  Page 201  STEPHEN FEINER Q Do you have an understanding of what it means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents.  Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do.  Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means.  Q Have you done any work in archiving or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	i .			
1 STEPHEN FEINER 2 And as I said, you could 3 imagine an example in which, because 4 there weren't a lot of documents created 5 over that time, if there were like, say, 6 conly one document, for whatever reason, 7 created during that period of time, 8 they'd simply need to know both the 9 upper and lower bound on the time 10 period, and then maybe they would find 11 that single document. 12 If they found multiple ones, 13 then maybe they would position their 14 cursor over the objects that they saw on 15 the screen to be able to gain more 16 information about it and figure out 17 which one it was. 18 Q Moving to Section D, labeled 19 Archiving, or titled Archiving, do you 20 consider yourself an expert in archiving? 21 A I'm not sure what you mean by 22 "expert." 23 Q You've been retained as an expert in 24 connection with this case by Apple, correct? 24 C Do you have an understanding of what it means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents.  9 Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned, or I had stuff I owned archived for me. Q Have you done any research into				
And as I said, you could imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document. If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled A I'm not sure what you mean by  Q You've been retained as an expert in connection with this case by Apple, correct?  Q Do you have an understanding of what it means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents.  Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q You've been retained as an expert in connection with this case by Apple, correct?				
imagine an example in which, because there weren't a lot of documents created over that time, if there were like, say, only one document, for whatever reason, created during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled A I'm not sure what you mean by  It means to be an expert in this case?  A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents. Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned archived for me. Q You've been retained as an expert in connection with this case by Apple, correct?			5	
there weren't a lot of documents created over that time, if there were like, say, only one document, for whatever reason, created during that period of time, they'd simply need to know both the upper and lower bound on the time upper and lower bound on the time that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled A My understanding is that I need to have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents. Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection. A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned, or I had stuff I owned archived for me. Q You've been retained as an expert in connection with this case by Apple, correct?	1		3	
over that time, if there were like, say, only one document, for whatever reason, recated during that period of time, they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  Q You've been retained as an expert in connection with this case by Apple, correct?  I have at least ordinary skill in the art, as I defined it. And I think I have ordinary skill in the art with regard to the contents of the patents.  Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do.  Q Do you think you have more than ordinary skill in the art with respect to archiving?  A I fim not quite sure what that means.  Q Have you done any work in archiving or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	1		3 .	<u> </u>
only one document, for whatever reason, created during that period of time, they'd simply need to know both the upper and lower bound on the time that single document. If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled A Chiving, or titled Archiving, do you consider yourself an expert in archiving?  Q You've been retained as an expert in connection with this case by Apple, correct?			3	
created during that period of time, they'd simply need to know both the upper and lower bound on the time that single document. If they found multiple ones, If they found multiple ones, information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  Q Have you done any research into connection with this case by Apple, correct?  skill in the art with regard to the contents of the patents.  Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do.  Q Do you think you have more than ordinary skill in the art with respect to archiving?  A I'm not quite sure what that means.  Q Have you done any work in archiving?  A I have certainly archived stuff that  I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	ı		3	
they'd simply need to know both the upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  Q You've been retained as an expert in connection with this case by Apple, correct?  It pool you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection. A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned, or I had stuff I owned archived for me. Q Have you done any research into archiving techniques?	i		3	
upper and lower bound on the time period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  Q You've been retained as an expert in connection with this case by Apple, correct?  Q Do you have ordinary skill in the art with respect to archiving?  A As the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned, or I had stuff I owned archived for me. Q Have you done any research into archiving techniques?	l '		( '	
period, and then maybe they would find that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  Q Wou've been retained as an expert in connection with this case by Apple, correct?  A sthe term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned, or I had stuff I owned archived for me. Q Have you done any research into archiving techniques?	i .		3	
that single document.  If they found multiple ones, then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not sure what you mean by  "expert."  Q You've been retained as an expert in connection with this case by Apple, correct?  A Is the term is used in the context of the patents, yes, I believe I do. Q Do you think you have more than ordinary skill in the art with respect to archiving?  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned, or I had stuff I owned archived for me. Q Have you done any research into archiving techniques?	l .	1 1	1	`
12 If they found multiple ones, 13 then maybe they would position their 14 cursor over the objects that they saw on 15 the screen to be able to gain more 16 information about it and figure out 17 which one it was. 18 Q Moving to Section D, labeled 19 Archiving, or titled Archiving, do you 20 consider yourself an expert in archiving? 21 A I'm not sure what you mean by 22 "expert." 23 Q You've been retained as an expert in 24 correct? 25 Og Have you done any research into 26 archiving the patents, yes, I believe I do. 27 Q Do you think you have more than 28 Og Do you think you have more than 28 Og Have with respect to 29 archiving? 20 A I'm not quite sure what that means. 20 Q Have you done any work in archiving or related to archiving? 21 I owned, or I had stuff I owned archived for me. 22 Q You've been retained as an expert in connection with this case by Apple, correct? 29 Q Have you done any research into archiving techniques?	B	•	3	
then maybe they would position their cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not sure what you mean by "expert."  Q Do you think you have more than ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means. Q Have you done any work in archiving or related to archiving? A I have certainly archived stuff that I owned, or I had stuff I owned archived for me. Q Have you done any research into archiving techniques?			2	₩.
cursor over the objects that they saw on the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not sure what you mean by connection with this case by Apple, correct?  14 ordinary skill in the art with respect to archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means.  Q Have you done any work in archiving or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q You've been retained as an expert in connection with this case by Apple, correct?		•	,	<u> </u>
the screen to be able to gain more information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not sure what you mean by "expert."  Q You've been retained as an expert in connection with this case by Apple, correct?  archiving?  MR. BROWN: Objection.  A I'm not quite sure what that means.  Q Have you done any work in archiving?  or related to archiving?  A I have certainly archived stuff that  I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	13		₹	
information about it and figure out which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not sure what you mean by "expert."  Q You've been retained as an expert in Connection with this case by Apple, correct?  I MR. BROWN: Objection.  A I'm not quite sure what that means.  Q Have you done any work in archiving?  or related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	14	· · · · · · · · · · · · · · · · · · ·	5	· · · · · · · · · · · · · · · · · · ·
which one it was.  Q Moving to Section D, labeled Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not quite sure what that means.  Q Have you done any work in archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q You've been retained as an expert in Connection with this case by Apple, correct?  A I'm not quite sure what that means.  Q Have you done any work in archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	1		3	
Q Moving to Section D, labeled 18 Q Have you done any work in archiving 19 Archiving, or titled Archiving, do you 20 consider yourself an expert in archiving? 21 A I'm not sure what you mean by 22 "expert." 23 Q You've been retained as an expert in 24 connection with this case by Apple, correct? 28 Q Moving to Section D, labeled 19 Q Have you done any work in archiving 20 A I have certainly archived stuff that 21 I owned, or I had stuff I owned archived for 22 me. 23 Q Have you done any research into 24 archiving techniques?	16	3	;	- ¥
Archiving, or titled Archiving, do you consider yourself an expert in archiving?  A I'm not sure what you mean by "expert."  Q You've been retained as an expert in Connection with this case by Apple, correct?  A related to archiving?  A I have certainly archived stuff that I owned, or I had stuff I owned archived for me.  Q Have you done any research into archiving techniques?	1		3	
consider yourself an expert in archiving?  A I'm not sure what you mean by  "expert."  Q You've been retained as an expert in  connection with this case by Apple, correct?  CONSIDER A I have certainly archived stuff that  I owned, or I had stuff I owned archived for  me.  Q Have you done any research into  archiving techniques?	18		,	
A I'm not sure what you mean by 21 I owned, or I had stuff I owned archived for 22 "expert." 23 Q You've been retained as an expert in 24 connection with this case by Apple, correct? 25 I owned, or I had stuff I owned archived for 26 me. 27 Q Have you done any research into 28 archiving techniques?	19		4	
22 me. 23 Q You've been retained as an expert in 23 Q Have you done any research into 24 connection with this case by Apple, correct? 24 archiving techniques?	20		>	
Q You've been retained as an expert in 23 Q Have you done any research into connection with this case by Apple, correct? 24 archiving techniques?	21		•	-
connection with this case by Apple, correct? 24 archiving techniques?			?	₽
,	23		5	
	l			
25 A That is correct. 25 A It was not my understanding that a	24		?	

Page 202 Page 203 STEPHEN FEINER 1 STEPHEN FEINER 1 2 person needs to have done research to be 2 0 And you have used the tar command in 3 UNIX? 3 considered of ordinary skill in the art in 4 4 Α I have used the tar command in UNIX, something. 5 But outside of research that I 5 yes. 6 6 may have done to try to figure out what When you use the tar command in UNIX Q 7 7 technology I might want to use for to create an archive, does tar require that 8 archiving something, no, I have not 8 the original file that you're archiving be 9 9 deleted? written papers, per se, on archiving. 10 10 O Have you ever designed any software Α Tar was created, I think very 11 11 that implements archiving? wisely, not to require that the file that is 12 No, I have not. 12 being put into the tar file itself be 13 deleted. Because if it did that, all sorts 13 Can you name any commercially 14 14 available archiving utilities or software of really nasty stuff can happen if something 15 that were available in the 1996 time frame? went wrong. 15 16 Like what? 16 I can think of facilities that were Q 17 17 used in the process of archiving, which can Like if the file that you were A 18 also be used for other purposes. And there's 18 creating using tar, the tar file, as I'm 19 a range of ways in which the term is used. 19 referring to it, overflowed the amount of 20 20 surface that was available and it deleted the For example, the tar program 21 21 under UNIX is a program that was file that you were putting into it, you could 22 available well before the 1996 time 22 perhaps even irrevocably lose the file. 23 23 frame that can be used to create an So did tar copy the file that you 24 were archiving into the archive? 24 archive. It can be used for what people 25 Tar archiving -- I'm trying to 25 normally would think as being archived. Page 204 Page 205 STEPHEN FEINER 1 STEPHEN FEINER 1 2 remember. Tar archives are compressed. I'm 2 UNIX's abbreviation. 3 3 trying to remember what options I have for UNIX names a number of commands 4 4 doing the compression. And there are in rather confusing ways. One of the 5 most well-known examples is the cat 5 different implementations of tar, understand. 6 But I have usually used it in a command, which is an abbreviation for 6 7 7 way in which the file that was placed catenate. 8 8 into the tar file created by tar can be. Typically, if you give multiple 9 9 in its representation in tar, smaller files to the cat commands, it catenates. 10 than the file was represented on the 10 It appends one file after another. And 11 11 for those people who use cat -- and very disk originally. 12 few of them use it now -- it was very 12 And so there's this subtlety as 13 to whether that's a copy or -- I mean 13 often used to print on the screen or 14 certainly it's a loss list 14 into another file, just a single file. 15 15 representation of the file, but it may So it really didn't get used to 16 not be a bit-for-bit copy of the file. 16 catenate. 17 17 And the original file in that So tar I often used and I do particular example remained on the disk? 18 use now to create a file that contains a 18 19 The original file remained on the 19 set of files. I really wouldn't say I was archiving them. 20 20 disk. 21 I would say that usually, in 21 I would often use this to 22 22 those case, I wasn't thinking of myself create a file that was smaller than the 23 23 as archiving, per se, even though the files were individually that was just a 24 command is called tar, which technically 24 single file and that then I could send stands for "tape archive," which is 25 25 to somebody else, for example, through

	Page 250		Page 251
1	STEPHEN FEINER	1	STEPHEN FEINER
2	data unit.	2	And there are certainly other
3	Q Can you think of any way of going	3	ways in which I might have a big array
4	from the main stream data structure to the	4	of data units, but that might not be
5	data unit itself?	5	very general. Maybe, in particular
6	A Again, I could imagine and we're	6	cases, I might have a big array of
7	talking about in implementation that you	7	certain kind of data units.
8	would have in the main stream structure	8	Q If you look at the bottom of
9	that one approach might be a link list, let's	9	Page 13, the next element, heading G, it
10	say.	10	relates to a claim element "means for
11	And then the link list would be	11	associating each data unit with at least one
12	a link-listed structure, and the	12	chronological indicator having a respective
13	structure might contain, say, a	13	timestamp which identifies the data unit."
14	timestamp and some kind of pointer which	14	Do you see that?
15	would let me get actually at the data	15	A Yes, I do.
16	unit as it is stored in permanent	16	Q This element also doesn't recite a
17	memory, or perhaps even if it's stored	17	means for putting a timestamp into the
18		18	chronological indicator, does it?
19		19	A This claim does not cite a means for
20	notion. And that's how I would do it.	20	putting the timestamp into the chronological
21	I would do something in which I	21	indicator, but it does more specifically
22	had some kind of structure that had the	22	refer to the timestamp as identifying the
23	timestamp and that actually had some way	23	data unit.
24	of accessing, for example through a	24	Q If you look at Page 14 at the
25	pointer or an address, the data unit.	25	bottom, heading H relates to claim element
	Page 252	ĺ	Page 253
1		1	
1 2	STEPHEN FEINER	1 2	STEPHEN FEINER
2	STEPHEN FEINER that recites "means for generating a main	2	STEPHEN FEINER kind of document.
2	STEPHEN FEINER that recites "means for generating a main stream of data units."	2 3	STEPHEN FEINER kind of document. There may be some kind of other
2 3 4	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main	2 3 4	STEPHEN FEINER kind of document. There may be some kind of other information, perhaps a link list of some
2 3 4 5	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?	2 3 4 5	STEPHEN FEINER kind of document. There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with
2 3 4	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream	2 3 4 5 6	STEPHEN FEINER kind of document. There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link
2 3 4 5 6 7	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's	2 3 4 5	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be
2 3 4 5 6 7 8	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.	2 3 4 5 6 7	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main
2 3 4 5 6 7 8	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that	2 3 4 5 6 7 8	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.
2 3 4 5 6 7 8 9	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very	2 3 4 5 6 7 8 9	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an
2 3 4 5 6 7 8 9 10	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.	2 3 4 5 6 7 8 9 10	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?
2 3 4 5 6 7 8 9 10 11 12	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a	2 3 4 5 6 7 8 9 10 11	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in
2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet	2 3 4 5 6 7 8 9 10 11 12 13	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together	2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that together comprises some larger entity.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?  A Sure.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I	2 3 4 5 6 7 8 9 10 11 12 13 14 15	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I would necessarily say the main stream	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?  A Sure.  One way to generate an instance of a data structure in software is to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I would necessarily say the main stream was a data structure. I may say the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	stephen feiner kind of document. There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software? A There is more than one way to generate an instance of a data structure in software. Q Can you name one? A Sure. One way to generate an instance of a data structure in software is to have some prototype of that data
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I would necessarily say the main stream was a data structure. I may say the main stream is comprised of a bunch of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	stephen feiner kind of document. There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software? A There is more than one way to generate an instance of a data structure in software. Q Can you name one? A Sure. One way to generate an instance of a data structure in software is to have some prototype of that data structure that, you know, would tell the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I would necessarily say the main stream was a data structure. I may say the main stream is comprised of a bunch of data structures.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	stephen feiner kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?  A Sure.  One way to generate an instance of a data structure in software is to have some prototype of that data structure that, you know, would tell the computer how much space needs to be
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I would necessarily say the main stream was a data structure. I may say the main stream is comprised of a bunch of data structures.  For example, since a main	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?  A Sure.  One way to generate an instance of a data structure in software is to have some prototype of that data structure that, you know, would tell the computer how much space needs to be allocated and then make a call to some
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I would necessarily say the main stream was a data structure. I may say the main stream is comprised of a bunch of data structures.  For example, since a main stream contains documents, the data	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?  A Sure.  One way to generate an instance of a data structure in software is to have some prototype of that data structure that, you know, would tell the computer how much space needs to be allocated and then make a call to some facility that generates that amount of
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	STEPHEN FEINER that recites "means for generating a main stream of data units."  Do you understand that a main stream is a data structure?  A I understand that a main stream stores every document on the system that's relevant to the user or entity.  "Data structure" is a word that it's easy to use it to refer to a very small entity, a very small structure.  But sometimes you may have a data structure that points to another data structure that points to yet another data structure that together comprises some larger entity.  So it's not clear to me that I would necessarily say the main stream was a data structure. I may say the main stream is comprised of a bunch of data structures.  For example, since a main	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	STEPHEN FEINER kind of document.  There may be some kind of other information, perhaps a link list of some sort, which is used in conjunction with the things that elements of that link list point to, which could ultimately be the documents that are part of that main stream.  Q Do you know how to generate an instance of a data structure in software?  A There is more than one way to generate an instance of a data structure in software.  Q Can you name one?  A Sure.  One way to generate an instance of a data structure in software is to have some prototype of that data structure that, you know, would tell the computer how much space needs to be allocated and then make a call to some

At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code.  But an integer is a very, very simple  11 pointer to that data structure. So that would be a very simple example.  12 would be a very simple example.  13 I don't think in this case,  14 given how much more complex the main stream is, that a very simple structure,  15 a character or a floating-point number,  16 that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  18 line of code. I think we're talking about potentially many, many lines of code.  19 Like how many lines does it take to create a directory in an operating system?  20 Like how many lines does it take to create a directory in an operating system?  18 line of code. Like how many lines does it take to create a directory in an operating system?  21 I would suspect that if one	Page 254		Page 255
that generated data structure. Q And how many lines of software code would that take in typical high-level programming? A If the code includes the definition of the data structure might be extraordinarily large. It may have many, many pieces each, which, for clarity, might correspond to a single line. So I would need both a definition of the data structure, sometimes even literally stored in a completely different file, included as a completely different file, included as a definition of the data structure, shall kile, let's say, that have out a clarity might be were talking about as might lart things from that would actually do the allocation if the world talking about sample, literally accorded to the course, each of which represents a document and perhaps has a timestamp in it. I recall that a man stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER  Treell that a man stream, of course, each stream needs to have a  Page 257  STEPHEN FEINER  Treell that a man stream, of course, cach stream needs to have a  Page 257  STEPHEN FEINER  Treell that a man stream, of course, cach stream needs to have a  Page 257  STEPHEN FEINER  Treell that a man stream, of course, cach stream needs to have a  Page 257  STEPHEN FEINER  Treell that a man stream, of course, cach stream needs to have a  Page 257  And then maybe you need to be  STEPHEN FEINER  Treell that a man stream, of course, cach stream needs to have a  Page 257  And then maybe you need to be  Page 257  And then maybe you need to be  STEPHEN FEINER  Treell that a man stream, of course, cach stream needs to have a  pointer to, so that you don't have to have a  special case of having nothing being pointed to at you all, so you'd have to a special case of having nothing being pointed to at you all, so you'd have to create that  At the lowest level, I don't think wert talking about a single line of code, for example, lithink were talking about as single line of code desit take to create an intege, ran int'!  Well, I can declare something to be an in		1	STEPHEN FEINER
Q And how many lines of software code would that take in typical high-level programming? A If the code includes the definition of the data structure itself, the data structure might be extraordinarily large. It may have many, many pieces each, which, for clarity, might correspond to a single line. So I would need both a definition of the data structure, sometimes even literally stored in a completely different file, included as a the adder file, for example. And then I would need a line that would actually do the allocation if we're talking about something that involves a set of different data structures, a link list, let's say, that points to a variety of data structures, each of which represents a document and perhaps has a timestamp in it. I recall that a main stream, of course, each stream needs to have a  Fage 256  STEPHEN FEINER  Treally depends on the particular implementation. At the lowest level, I don't think we're talking about a single line of code, for example, I think we may be at laking about many lines of code. Well, I can declare something to be an int and say, "I've got it." Or lease of the sound say, "I've got it." Or lease of	l	5	į.
would that take in typical high-level programming?  A If the code includes the definition of the data structure itself, the data structure might be extraordinarily large. It may have many, many pieces each, which, for clarity, might correspond to a single line.  So I would need both a sometimes even literally stored in a completely different file, included as a the header file, for example. And then I would need a line that would actually do the allocation if we're talking about something that involves a set of different data points to a variety of data structures, a link list, let's say, that points to a variety of data structures, can be down which represents a document and perhaps has a timestamp in it. Trecall that a main stream, of course, each stream needs to have a  STEPHEN FEINER  sure that things were properly nulled out. Maybe there's a token item that's kind of like the one thing that things point to, so that you don't have to bave a special case of having nothing being pointed to at you all, so you'd have to create that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example, I think we may be talking about many lines of code.  A What I mean is that, for example, how many lines of code does it take to create an integer, an int'?  Well, I can declare something Well, I can declare something an integer, an int'?  Well, I can declare something that we're talking about a single line of code, for example, I think we may be an integer, an int'?  Well, I can declare something to be an intaged as year, yety yety simple  Like how many lines of code does it take to create an integer, an int'?  Well, I can declare something the present and the present unred into the future. Those points would need to be set.  And while you might have ontice the main stream, the code that actually did the creating the pointers, let's say, if there were pointers being used to differentiate between past, present and future.  Sometimes in situa		2	
into where the past turned into the present and the present turned into the future. Those points would need to be set.  And while you might have one single line. The program that, at the top level, was called to create that set of data structures. Sometimes even literally stored in a completely different file, included as a header file, for example. The work talking about as single line of code in a nicely-written program that, at the top level, was called to create that set of data structures, and then I would need a line that would actually do the allocation if the we're talking about something that involves a set of different data involves as et alia. Involves a set of different data involves as et alia involves as et different data involves as et alia involves as et alia involves aset data. Involves a set of different data involves as et alia		ş	<b>I</b> S
A If the code includes the definition of the data structure might be extraordinarily large. It may have many, many pieces each, which, for clarity, might correspond to a single line.  So I would need both a completely different file, included as a least enterty.  So I would need both a completely different file, included as a least enterty.  And then I would need a line completely different file, included as a least enterty.  Mere talking about something that involves a set of different data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that out.  Trecall that a main stream, of course, each stream needs to have a special case of having nothing being point to, so that you don't have to have a special case of having nothing being point to, so that you don't have to have a react that.  I treally depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  We'll, I can declare something to be an intand say," "I've got it." Or least an intager, and that's one line of code.  Well, I can declare something to be an intand say," "I've got it." Or least an integer, an integer an integer, an integer an integer, an integer an integer, an integer an in	* * · · ·	•	
of the data structure itself, the data structure might be extraordinarily large. It may have many, many pieces each, which, for clarity, might correspond to a single line. So I would need both a definition of the data structure, definition of the data structure, aciled to create that set of data sometimes even literally stored in a completely different file, included as a header file, for example. And then I would need a line And then I would need a line that would actually do the allocation if we're talking about something that involves a set of different data structures, a link list, let's say, that jinvolves a set of different data perhaps has a timestamp in it. I recall that a main stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER  STEPHEN FEINER  STEPHEN FEINER  STEPHEN FEINER  STEPHEN FEINER  STEPHEN FEINER  Lould allocate a struct, a special case of having nothing being point to, so that you don't have to have a a special case of having nothing being point to, so that you all, so you'd have to create that.  He really dopends on the particular implementation.  A the lowest level, I don't think we're talking about a single line of code, for cyample.  A What I mean is that, for example, how many lines of code does it take to create an integer, an int'g  Well, I can declare something an integer, an ant, Three fines.  And while you might have one single line of code in code in clock withing the called the creater in the treating might have intilled by structures to create that a structure. The code that actually did the creating might have intilled to create that a structure and future.  Sometimes in situations like the pointers, let's say, if there were pointers being used to differentiate between past, present and future.  Sometimes revisitions like the pointers, let's say, from scratch, there might be nothing in it at all.  And then maybe you need to be  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entires. Like probably to make things lo	1 0 0	2	
structure might be extraordinarily large. It may have many, many pieces each, which, for clarity, might correspond to a single line.  So I would need both a completely different file, included as a completely different file, or cample.  And then I would need both a completely different file, or cate that a main stream, and furure.  Sometimes even literally stored in a completely different file, or cate that a file pointers betive and furure.  Page 256  STEPHEN FEINER  STEPHEN FEINER  STEPHEN FEINER  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  O You said, 'the lowest level.' What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create a integer, an int?  Well, I can declare something an integer, an int?  Well, I can declare something code.  But an integer is a very, very simple to correct that in the correct and integer is a very, very simple to corr		ζ	
may have many, many pieces each, which, for clarity, might correspond to a single line.  So I would need both a definition of the data structure, as sometimes even literally stored in a completely different file, included as a header file, for example.  And then I would need a line that would actually do the allocation if the we're talking about something that involves a set of different data involves a		ŧ .	- · · · · · · · · · · · · · · · · · · ·
clarity, might correspond to a single line.  So I would need both a definition of the data structure, sometimes even literally stored in a completely different file, included as a header file, for example.  And then I would aced a line that would actually do the allocation if we're talking about something that involves a set of different data points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a called to create that set of data structures to create the main stream, the code that actually did the creating might have quite a large number of lines of coding, including ones for setting the pointers, let's say, if there were pointers being used to differentiate between past, present and future.  Sometimes in situations like that you might have initially when you make a main stream, lef say, from scratch, there might be nothing in it at all.  Trecall that a main stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER sure that things were properly nulled out. Maybe there's a token item that's kind of like the one thing that things a special case of having nothing being pointed to at you all, so you'd have to create that.  Sometimes even literally structures, to create that.  Sometimes retwee, pointers being used to differentiate between past, present and future.  Sometimes in situations like that you might have initially when you make a main stream, of course, each stream needs to have a  STEPHEN FEINER  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I need a line for each member of the structure.  And then I might make literally a single line of code that cate undil did action procedure malik and assigned the address that it returned to a pointer to that data structure. So that that you many lines of code does it take to create an integer, and that's one line of code.  But an integer is a very, very simple		3	Di
So I would need both a definition of the data structure, as definition of the data structure, as cometimes even literally stored in a completely different file, included as a time that a completely different file, included as a time that would actually do the allocation if the work talking about something that a min stream, and the code that actually did the creating might have quite a large number of lines of coding, including ones for setting the pointers, let's say, if there were pointers being used to differentiate between past, present and future.  Sometimes in situations like a between past, present and future.  Sometimes in situations like that you make a main stream, let's say, from scratch, there might be nothing in it at all.  I recall that a main stream, of 24 all.  And then maybe you need to be a special case of having nothing being point to, so that you don't have to have a special case of having nothing being pointed to at you all, so you'd have to a special case of having nothing being pointed to at you all, so you'd have to a special case of having nothing being pointed to at you all, so you'd have to a special case of having nothing being pointed to at you all, so you'd have to treate that.  It have been past, present and future.  Sometimes are large number of lines of code that called the allocation procedure mails and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream, in t		3	
definition of the data structure, sometimes even literally stored in a completely different file, included as a header file, for example.  And then I would need a line that would actually do the allocation if that would actually do the allocation if that would actually do the allocation if the pointers, let's say, if there were we're talking about something that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that profits to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that points to a variety of data structures, a link list, let's say, that link list, let's say, that list let's say in character, let's say, from scratch, there might be nothing in it at all.  And then maybe you need to be  Page 256  1 STEPHEN FEINER list let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. Sometimes in situations like that you might have upited by a single line of code. It hink we're talking about a single line of code. It hink we're talking about a single line of code. It hink we're talking about a single line of code. It hink we're talking about a single line of code. It hink we're talking about a single	<i>3</i> , 0	5	· · · · · · · · · · · · · · · · · · ·
sometimes even literally stored in a completely different file, included as a 14 the code that actually did the creating might have quite a large number of lines of coding, including ones for setting that would actually do the allocation if 17 that would actually do the allocation if 18 we're talking about something that 18 we're talking about something that 18 we're talking about something that 19 without saveriety of data structures, 20 structures, a link list, let's say, that 20 points to a variety of data structures, 21 points to a variety of data structures, 22 perhaps has a timestamp in t. 23 scratch, there might be nothing in it at 24 I recall that a main stream, of 25 course, each stream needs to have a 25 Page 256  STEPHEN FEINER 11 STEPHEN FEINER 2 sure that things were properly nulled 2 out. Maybe there's a token item that's 2 point to, so that you don't have to have a 3 special case of having nothing being 2 pointed to at you all, so you'd have to 2 pointed to at you all, so you'd have to 2 particular implementation. 10 At the lowest level, I don't think we're talking about any lines of code. 3 Well, I can declare something 4 how many lines of code does it take to create an integer, an int? 4 Well, I can declare something 20 Well, I can declare something 20 Well, I can declare something 21 to be an int and say, "Tve got it." Or 21 I could malk, let's say, allocate an integer, an integer, an integer, an integer, an integer, an integer, and that's one line of code. 23 integer, and that's one line of code. 24 But an integer; as a very, very simple 24 But an integer; an early of the code. 25 brack that in terturally did the creating might have enitially did the creating might have enities of coding, including ones for setting the pointers, let's say, if the pointers, let's say, if the pointers, let's say, if the pointers being used to differentiate between past, present and future. Sometimes in situations like that you might have initially when you make a main stream, let's say, from scratch, there were			
completely different file, included as a header file, for example.  And then I would actually do the allocation if that would actually do the allocation if we're talking about something that involves a set of different data 19 involves a set of different data 19 points to a variety of data structures, alink list, let's say, that 20 structures, a link list, let's say, that 21 points to a variety of data structures, 22 each of which represents a document and 22 perhaps has a timestamp in it. 23 scratch, there might have initially when you make a main stream, let's say, from scratch, there might be nothing in it at all.  And then maybe you need to be 257  STEPHEN FEINER 1 STEPHEN FEINER 2 sure that things were properly nulled 3 out. Maybe there's a token item that's 3 wind of like the one thing that things 4 hond of like the one thing that things 4 a special case of having nothing being 6 a special case of having nothing being 6 a special case of having nothing being 6 a pecial case of having nothing being 6 a special case of having nothing being 6 a special case of having nothing being 6 a special case of having nothing being 6 a pointed to at you all, so you'd have to create that. 8 It really depends on the 9 particular implementation. 10 At the lowest level, I don't 11 think we're talking about a single line of code, for example. 14 talking about any lines of code. 14 and then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. Sometimes in situations like that you might have quite a large number of interest axy, if there were pointers let's say, if there were pointers let's say, if there were pointers let's say, if the pointers, let's say, if there were pointers l		5	No.
header file, for example.  And then I would need a line that would actually do the allocation if that would actually do the allocation if that would actually do the allocation if the we're talking about something that involves a set of different data tinvolves a set of different data points to a variety of data structures, ach of which represents a document and perhaps has a timestamp in it.  I recall that a main stream, of course, each stream needs to have a  STEPHEN FEINER sure that things were properly nulled out. Maybe there's a token item that's hind of like the one thing that things point to, so that you don't have to have create that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example, I think we may be talking about many lines of code. Q You said, "the lowest level." What do you mean by that? A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something Like how many lines of code. Well, I can declare something Well, I can declare something Like how many lines of code. Well, I can declare something Like how many lines does it take to create a directory in an operating system? I would suspect that if one	•	3	·
And then I would actually do the allocation if that would actually do the allocation if we're talking about something that involves a set of different data involves a set of different data structures, a link list, let's say, that 20 points to a variety of data structures, 21 points to a variety of data structures, 22 each of which represents a document and 22 perhaps has a timestamp in it. 23 perhaps has a timestamp in it. 24 I recall that a main stream, of 24 I recall that a main stream, of 24 I recall that a main stream, of 24 I all. And then maybe you need to be 25		>	
that would actually do the allocation if we're talking about something that involves a set of different data points to a variety of data structures, ach of which represents a document and perhaps has a timestamp in it. Treall that a main stream, of course, each stream needs to have a  STEPHEN FEINER Sure that things were properly nulled out. Maybe there's a token item that's for point to, so that you don't have to have a special case of having nothing being pointed to at you all, so you'd have to reate that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example, I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to the an int and say, "I've got it." Or liculd malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  the pointers, let's say, if there were popinters being pointers being between past, present and future.  Sometimes in situations like that you might have initially when you make a main stream, let's say, from scratch, there might be nothing in it at all.  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then I might hake literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that datas stru		4	
we're talking about something that involves a set of different data structures, a link list, let's say, that 20 sometimes in situations like 21 points to a variety of data structures, each of which represents a document and 22 make a main stream, let's say, from 23 perhaps has a timestamp in it. 23 scratch, there might be nothing in it at 24 I recall that a main stream, of 24 all.  25 course, each stream needs to have a 25 Page 256 Page 257  1 STEPHEN FEINER 1 STEPHEN FEINER 2 sure that things were properly nulled 3 out. Maybe there's a token item that's 3 let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that think we're talking about a single line of code, for example. I think we many lines of code does it take to create an integer, an int'? Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple 24 livenum and that's one line of code. But an integer is a very, very simple 24 livenum and that's one line of code. But an integer is a very, very simple 24 livenum and that's one line of code. But an integer is a very, very simple 24 livenum and that if one		3	
between past, present and future.  Sometimes in situations like points to a variety of data structures, each of which represents a document and perhaps has a timestamp in it.  I recall that a main stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER  Sure that things were properly nulled out. Maybe there's a token item that's kind of like the one thing that things point to, so that you don't have to have a special case of having nothing being pointed to at you all, so you'd have to reate that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, line of code. It hink we're talking about many lines of code does it take to create an integer, an int?  Well, I can declare something Universely the say, then you make a main stream, let's say, from scratch, there might be nothing in it at all.  Sometimes in situations like You make a main stream, let's say, from scratch, there might be nothing in it at all.  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. And then maybe you need to be  Page 257  A mad then maybe you need to be  Page 257  I STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. And then maybe you need to be  Page 257  And then maybe you need to be  Page 257  And then maybe you need to be  Page 257  And then maybe you rece diventing in it at all.  STEPHEN FEINER  I could allocate a struct, allet's say in C, that had a very small and assigned the allocation procedure malk and assigned the allocation proced	,	5	
structures, a link list, let's say, that points to a variety of data structures, each of which represents a document and perhaps has a timestamp in it.  I recall that a main stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER sure that things were properly nulled out. Maybe there's a token item that's kind of like the one thing that things point to, so that you don't have to have for eate that.  I treally depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code.  STEPHEN FEINER  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. And then I might make literally a single line of code that called the a line for each member of the structure. And then I might make literally a single line of code that as a very simple example. I don't think in this case, given how much more complex the main stream, let's say, illocate an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code.  Bay and then maybe you need to be  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. And then I might make literally a single line of code that called the let's say in C, that had a very simple thate the adlease that it returned to a pointer to that data structure. So that would be a very si			
points to a variety of data structures, each of which represents a document and perhaps has a timestamp in it.  I recall that a main stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER  sure that things were properly nulled kind of like the one thing that things point to, so that you don't have to have a a special case of having nothing being pointed to at you all, so you'd have to recate that.  I treally depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code does it take to create an integer, an int?  Well, I can declare something to well, it on the lowest in the main stream, let's say, from sacratch, there might be nothing in it at all.  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about just a single line of code.  Lik		5	
each of which represents a document and perhaps has a timestamp in it.  I recall that a main stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER  Sure that things were properly nulled out. Maybe there's a token item that's point to, so that you don't have to have a a special case of having nothing being pointed to at you all, so you'd have to create that.  I treally depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to the be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code.  Bage 256  Page 256  Page 257  STEPHEN FEINER  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code.  Like how many lines of code.  Like how many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one			N.
perhaps has a timestamp in it.  I recall that a main stream, of course, each stream needs to have a  Page 256  STEPHEN FEINER  sure that things were properly nulled out. Maybe there's a token item that's kind of like the one thing that things point to, so that you don't have to have of a special case of having nothing being pointed to at you all, so you'd have to create that.  It really depends on the particular implementation. At the lowest level, I don't think we're talking about a single line of code, for example, I think we're talking about any lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to to be an int and say, "I've got it." Or licular integer, and that's one line of code.  Brage 257  STEPHEN FEINER  STEPHEN FEINER I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code.  Well, I can declare something to be an int and say, "I've got it." Or label that we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one		,	
24 Î recall that a main stream, of course, each stream needs to have a  Page 256  Page 257  1 STEPHEN FEINER 2 sure that things were properly nulled 3 out. Maybe there's a token item that's 4 kind of like the one thing that things 5 point to, so that you don't have to have 6 a special case of having nothing being 7 pointed to at you all, so you'd have to 8 create that. 9 It really depends on the 10 particular implementation. 11 At the lowest level, I don't 12 think we're talking about a single line 13 of code, for example. I think we may be 14 talking about many lines of code. 15 Q You said, "the lowest level." What 16 do you mean by that? 17 A What I mean is that, for example, 18 how many lines of code does it take to create an integer, an int? 20 Well, I can declare something 21 to be an int and say, "I've got it." Or 22 I could malik, let's say, allocate an integer, and that's one line of code. 24 But an integer is a very, very simple  Page 257  And then maybe you need to be  Page 257  And then maybe you need to be  Page 257  And then maybe you need to be  Page 257  And then maybe you need to be  Page 257  STEPHEN FEINER  I could allocate a struct,  let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure.  And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple exmeture. So that would be a very simple exmeture, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one	<b>▲</b>	<	
25 course, each stream needs to have a  Page 256  Page 257  1 STEPHEN FEINER 2 sure that things were properly nulled 3 out. Maybe there's a token item that's 4 kind of like the one thing that things 5 point to, so that you don't have to have 6 a special case of having nothing being 7 pointed to at you all, so you'd have to 8 create that. 9 It really depends on the 10 particular implementation. 11 At the lowest level, I don't 12 think we're talking about a single line 13 of code, for example. I think we may be 14 talking about many lines of code. 15 Q You said, "the lowest level." What 16 do you mean by that? 17 A What I mean is that, for example, 18 how many lines of code does it take to create an integer, an int? 20 Well, I can declare something 21 to be an int and say, "I've got it." Or 22 I could malik, let's say, allocate an integer, and that's one line of code. 24 But an integer is a very, very simple  1 STEPHEN FEINER 1 STEPHEN FEINER 1 STEPHEN FEINER 1 I could allocate a struct, 1 let's say in C, that had a very small 1 number of entries. Like probably to 1 make hitings look very nice, I'd need a line for each member of the structure. 25 And then I maybe you need to be 26 a special case of having nothing being 26 liet's say in C, that had a very small 27 number of entries. Like probably to 28 make things look very nice, I'd need a line for each member of the structure. 28 a single line of code that structure. 29 a character and that's one line of code. 21 Like how many lines does it 24 but an integer is a very, very simple 25 I would suspect that if one		5	
Page 256  STEPHEN FEINER  sure that things were properly nulled out. Maybe there's a token item that's divind of like the one thing that things for point to, so that you don't have to have a special case of having nothing being for pointed to at you all, so you'd have to create that.  It really depends on the particular implementation. At the lowest level, I don't think we're talking about a single line of code, for example, At Mat I mean is that, for example, how many lines of code does it take to create how many lines of code does it take to create to be an int and say, "I've got it." Or Well, I can declare something Well an integer, an integer, and that's one line of code.  Brage 257  STEPHEN FEINER  1			Di Contra di Con
STEPHEN FEINER  sure that things were properly nulled  out. Maybe there's a token item that's  kind of like the one thing that things  point to, so that you don't have to have  a special case of having nothing being  pointed to at you all, so you'd have to  react that.  It really depends on the  particular implementation.  At the lowest level, I don't  think we're talking about a single line  of code, for example. I think we may be  talking about many lines of code.  Q You said, "the lowest level." What  do you mean by that?  A What I mean is that, for example,  how many lines of code does it take to create  how many lines of code does it take to create  to be an int and say, "I've got it." Or  I could allocate a struct,  let's say in C, that had a very small  number of entries. Like probably to  make things look very nice, I'd need a  line for each member of the structure.  And then I might make literally  a single line of code that called the  allocation procedure malik and assigned the address that it returned to a  pointer to that data structure. So that  would be a very simple example.  I don't think in this case, given how much more complex the main  stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u> </u>	
sure that things were properly nulled out. Maybe there's a token item that's kind of like the one thing that things point to, so that you don't have to have a special case of having nothing being pointed to at you all, so you'd have to create that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to the day a sure that think we're talking about a single line of example. I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  I could allocate a struct, let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a let's say in C, that had a very small number of entries. Like probably to make things look very nice, I'd need a line for each member of the structure. And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one			
out. Maybe there's a token item that's kind of like the one thing that things point to, so that you don't have to have a special case of having nothing being pointed to at you all, so you'd have to reate that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What O you mean by that?  A What I mean is that, for example, how many lines of code does it take to create how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or C Gude that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example. I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one		3	R.
kind of like the one thing that things point to, so that you don't have to have a special case of having nothing being pointed to at you all, so you'd have to create that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create how many lines of code does it take to create to be an int and say, "I've got it."  Wind of like the one thing that things make things look very nice, I'd need a line for each member of the structure. And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one		3	
point to, so that you don't have to have a special case of having nothing being pointed to at you all, so you'd have to create that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create how many lines of code does it take to create to be an int and say, "I've got it." Or Well, I can declare something C Tould malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  make things look very nice, I'd need a line for each member of the structure. And then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one		3	and the second s
a special case of having nothing being pointed to at you all, so you'd have to reate that.  It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or lace of code. But an integer, and that's one line of code. But an integer, and that's one line of code. But an integer is a very, very simple  line for each member of the structure. And then I might make literally a single line of code that called the a llocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example. I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system? I would suspect that if one		3	
pointed to at you all, so you'd have to create that.  It really depends on the It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  You said, "the lowest level." What do you mean by that? A What I mean is that, for example, how many lines of code does it take to create how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or Claim of code. Like how many lines does it take to create a directory in an operating system?  A Mud then I might make literally a single line of code that called the allocation procedure malik and assigned the address that it returned to a line allocation procedure malik and assigned the address that it returned to a line allocation procedure malik and assigned the address that it returned to a line allocation procedure malik and assigned the address that it returned to a line allocation procedure malik and assigned the address that it returned to a line address that it returned to a line allocation procedure malik and assigned the address that it returned to a line allocation procedure malik and assigned the address that it returned to a line allocation procedure malik and assigned the address that it returned to a line allocation procedure malik and assigned line of code, state to that data structure. So that would be a very simple example. line of code, I think we're talking about just a single line of code. I think we're talking about potentially many, many lines of code. Like how many lines does it take to create a directory in an operating system? I would suspect that if one		3	
8 create that. 9 It really depends on the 10 particular implementation. 11 At the lowest level, I don't 12 think we're talking about a single line 13 of code, for example. I think we may be 14 talking about many lines of code. 15 Q You said, "the lowest level." What 16 do you mean by that? 17 A What I mean is that, for example, 18 how many lines of code does it take to create 19 an integer, an int? 20 Well, I can declare something 21 to be an int and say, "I've got it." Or 22 I could malik, let's say, allocate an 23 integer, and that's one line of code. 24 But an integer is a very, very simple  8 a single line of code that called the 9 allocation procedure malik and assigned 10 the address that it returned to a 11 pointer to that data structure. So that 12 would be a very simple example. 13 I don't think in this case, 14 given how much more complex the main 15 stream is, that a very simple structure, 16 a character or a floating-point number, 17 that we're talking about just a single 18 line of code. I think we're talking 19 about potentially many, many lines of 19 code. 20 Like how many lines does it 21 take to create a directory in an 22 operating system? 23 I would suspect that if one		6	į.
It really depends on the particular implementation.  At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  You said, "the lowest level." What do you mean by that? A What I mean is that, for example, how many lines of code does it take to create how many lines of code does it take to create well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  allocation procedure malik and assigned the address that it returned to a pointer to that data structure. So that would be a very simple example.  I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code. Like how many lines does it take to create a directory in an operating system? I would suspect that if one	· · · · · · · · · · · · · · · · · · ·	7	
10 particular implementation. 11 At the lowest level, I don't 12 think we're talking about a single line 13 of code, for example. I think we may be 14 talking about many lines of code. 15 Q You said, "the lowest level." What 16 do you mean by that? 17 A What I mean is that, for example, 18 how many lines of code does it take to create 19 an integer, an int? 20 Well, I can declare something 21 to be an int and say, "I've got it." Or 22 I could malik, let's say, allocate an 23 integer, and that's one line of code. 24 But an integer is a very, very simple 26 Think we're talking it returned to a 27 the address that it returned to a 28 the address that it returned to a 29 the address that it returned to a 20 the address that it returned to a 20 the address that it returned to a 21 the address that it returned to a 22 the address that it returned to a 23 the address that it returned to a 24 the address that it returned to a 25 that 26 pointer to that data structure. So that 27 would be a very simple example. 28 that it returned to a 29 the address that it returned to a 29 that 20 would be a very simple example. 21 that data structure. So that 22 that a very simple example. 23 that a very simple example. 24 liden't think in this case, 26 that 27 a don't think in this case, 28 that a very simple example. 29 that a very simple example. 20 that a very simple example, 21 that a very simple example, 21 that a very simple example, 22 that a very simple example, 23 that a very simple example, 24 that a very simple example, 25 that a very simple example, 26 a character or a floating-point number, 27 that we're talking about just a single 28 line of code. I think we're talking 29 a character or a floating-point number, 20 that a very simple example, 20 a character or a floating-point number, 21 that we're talking about just a single 29 character		5	L L
At the lowest level, I don't think we're talking about a single line of code, for example. I think we may be talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code.  But an integer is a very, very simple  11 pointer to that data structure. So that would be a very simple example.  12 would be a very simple example.  13 I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one		3	
think we're talking about a single line of code, for example. I think we may be talking about many lines of code. Q You said, "the lowest level." What do you mean by that? A What I mean is that, for example, how many lines of code does it take to create an integer, an int? Well, I can declare something Well, I can desclare something I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  would be a very simple example. I don't think in this case, given how much more complex the main stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code. Like how many lines does it take to create a directory in an operating system? I would suspect that if one		5	<b>.</b>
13 of code, for example. I think we may be 14 talking about many lines of code. 15 Q You said, "the lowest level." What 16 do you mean by that? 17 A What I mean is that, for example, 18 how many lines of code does it take to create 19 an integer, an int? 20 Well, I can declare something 21 to be an int and say, "I've got it." Or 22 I could malik, let's say, allocate an 23 integer, and that's one line of code. 24 But an integer is a very, very simple  13 I don't think in this case, given how much more complex the main 15 stream is, that a very simple structure, 16 a character or a floating-point number, 17 that we're talking about just a single 18 line of code. I think we're talking 19 about potentially many, many lines of 20 code. 21 Like how many lines does it 22 take to create a directory in an 23 operating system? 24 I would suspect that if one		3	- n
talking about many lines of code.  Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something Well, I can declare something I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  14 given how much more complex the main 15 stream is, that a very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system? I would suspect that if one		5	
Q You said, "the lowest level." What do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code.  But an integer is a very, very simple structure, a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one		3	· · · · · · · · · · · · · · · · · · ·
do you mean by that?  A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  16 a character or a floating-point number, that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system? I would suspect that if one		5	
A What I mean is that, for example, how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  17 that we're talking about just a single line of code. I think we're talking about potentially many, many lines of code.  21 Like how many lines does it take to create a directory in an operating system? I would suspect that if one	l '	3	
how many lines of code does it take to create an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or to be an integer, and that's one line of code.  I could malik, let's say, allocate an integer, and that's one line of code.  I integer, and that's one line of code.  But an integer is a very, very simple to create a line of code. I think we're talking about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system?  I would suspect that if one	1	5	
an integer, an int?  Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code.  But an integer is a very, very simple  about potentially many, many lines of code.  Like how many lines does it take to create a directory in an operating system? I would suspect that if one	1	3	
Well, I can declare something to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  20 code. Like how many lines does it take to create a directory in an operating system? I would suspect that if one	,	>	· · · · · · · · · · · · · · · · · · ·
to be an int and say, "I've got it." Or I could malik, let's say, allocate an integer, and that's one line of code. But an integer is a very, very simple  Like how many lines does it take to create a directory in an operating system? I would suspect that if one	,		· · · · · · · · · · · · · · · · · · ·
I could malik, let's say, allocate an 22 take to create a directory in an 23 integer, and that's one line of code. 23 operating system?  But an integer is a very, very simple 24 I would suspect that if one	·	7	
integer, and that's one line of code.  23 operating system?  24 But an integer is a very, very simple  24 I would suspect that if one		•	
But an integer is a very, very simple 24 I would suspect that if one		7	· · · · · · · · · · · · · · · · · · ·
	23 integer, and that's one line of code.	5	
		>	
25 kind of data structure. §25 were to look at the source code for an	25 kind of data structure.	25	were to look at the source code for an

Page 258 Page 259 1 STEPHEN FEINER STEPHEN FEINER 1 2 2 "facility" in the claims of the '427 patent Apple operating system, there would be are referring to a public library? 3 many, many lines of code involved in 3 This is being a little bit facetious 4 creating a directory. 4 5 5 And I would suspect that if one over here. But the point is that I'm not 6 were to look at half of the code that 6 sure -- it says, "A document organizing 7 7 embodied one of these implementations of facility receiving documents automatically 8 streams, then we'd also find many lines 8 associating respective selective 9 of code involved in creating a main 9 indicators" ---10 10 I'm trying to see other stream. 11 If you could turn to Page 18, and 11 occurrences of "document organizing O 12 facility" in this claim. 12 referring to the paragraph in the middle, the 13 heading N, "Document Organizing Facility" --13 So I think the point that's 14 A Hold on. I also want to take a look 14 being made here is that I don't think 15 15 that the term "document organizing at the '427 patent. 16 16 facility" by itself is really a Okay. 17 You state in the middle the phrase, 17 sufficient structure. And that, you "Document organizing facility' encompasses 18 know, one needs to actually look into 18 19 19 any possible means of performing the function the specification to see what is being 20 of 'document organizing.' It includes a 20 referred to. public library and the desk of an IRS worker 21 But you don't believe the claim is 21 Q 22 or just about any office worker in America." 22 literally referring to the desk of an IRS 23 Do you see that? 23 worker, correct? 24 Yes, I see it. 24 A I agree, ves. 25 Do you believe that the term 25 And you don't literally believe that Page 260 Page 261 1 STEPHEN FEINER 1 STEPHEN FEINER 2 the claim is referring to a document 2 direction. 3 organizing facility as a public library, And I can also use Windows 3 4 correct? 4 Explorer to change the name of a 5 That is correct. 5 document, to move it up and down inside Α 6 And you go on to say that, "A 6 the hierarchy. I might cut a document 7 7 document organizing facility encompasses any and then move up in the hierarchy in 8 number of computer software processes and 8 Explorer and paste it somewhere else or 9 programs running on computers, including, for 9 down in the hierarchy and place it example, Windows Explorer and Mac OS Finder," 10 10 somewhere else or even into another copy 11 correct? 11 of Windows Explorer and place it 12 12 Α Correct. somewhere else. 13 How is Windows Explorer a document 13 I can do the same kind of thing 14 organizing facility? 14 in Mac OS Finder. 15 15 In Windows Explorer, I can see a How do you know if something is a 16 list of documents. I actually can see a list 16 document organizing facility? 17 of documents. I can see a graphical 17 Well, that's a good question. representation that isn't actually literally 18 18 Given that very general term, 19 19 a list. "document organizing facility," it seems 20 20 to me that it's not a term of the art. I can change the way in which the documents are organized. So I can 21 21 It's clearly being used in the patent, 22 sort them by date from most recent to 22 and I would give it probably a kind of least recent, from least recent to most 23 23 ordinary interpretation that it referred 24 24 recent. I can sort them by type, I can to something to organize documents. 25 sort them by name, again in either 25 And you kind of know what a