EXHIBIT D1

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/006,831	10/30/2003	5838906		9718

			EXAMINER
30080	7590	01/20/2006	

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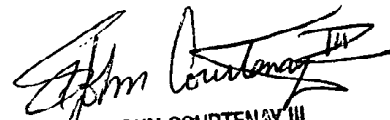| ART UNIT	PAPER NUMBER

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Control No.	Patent Under Reexamination
Notice of Intent to Issue ~~Supplemental~~ **Ex Parte Reexamination Certificate**	90/006,831	5838906
	Examiner	**Art Unit**	
	St. John Courtenay III	3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ Prosecution on the merits is (or remains) closed in this *ex parte* reexamination proceeding. This proceeding is subject to reopening at the initiative of the Office or upon petition. *Cf.* 37 CFR 1.313(a). A Certificate will be issued in view of

    (a) ☒ Patent owner's communication(s) filed: *12 October 2004*.

    (b) ☐ Patent owner's late response filed: _____.

    (c) ☐ Patent owner's failure to file an appropriate response to the Office action mailed: _____.

    (d) ☐ Patent owner's failure to timely file an Appeal Brief (37 CFR 41.31).

    (e) ☐ Other: _____.

Status of *Ex Parte* Reexamination:

    (f) Change in the Specification: ☐ Yes ☐ No

    (g) Change in the Drawing(s): ☐ Yes ☐ No

    (h) Status of the Claim(s):

        (1) Patent claim(s) confirmed: *1-10*.

        (2) Patent claim(s) amended (including dependent on amended claim(s)): _____

        (3) Patent claim(s) cancelled: _____.

        (4) Newly presented claim(s) patentable: _____.

        (5) Newly presented cancelled claims: _____.

2. ☒ Note the attached statement of reasons for patentability and/or confirmation. Any comments considered necessary by patent owner regarding reasons for patentability and/or confirmation must be submitted promptly to avoid processing delays. Such submission(s) should be labeled: "Comments On Statement of Reasons for Patentability and/or Confirmation."

3. ☒ Note attached NOTICE OF REFERENCES CITED (PTO-892).

4. ☐ Note attached LIST OF REFERENCES CITED (PTO-1449 or PTO/SB/08).

5. ☐ The drawing correction request filed on _____ is: ☐ approved ☐ disapproved.

6. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some* c)☐ None of the certified copies have

        ☐ been received.

        ☐ not been received.

        ☐ been filed in Application No. _____.

        ☐ been filed in reexamination Control No. _____.

        ☐ been received by the International Bureau in PCT Application No. _____.

    * Certified copies not received: _____.

7. ☐ Note attached Examiner's Amendment.

8. ☒ Note attached Interview Summary (PTO-474).

9. ☐ Other: _____.

St. John Courtenay III
Primary Examiner
Art Unit: 3992

cc: Requester (if third party requester)

REEXAMINATION

REASONS FOR PATENTABILITY / CONFIRMATION

Reexamination Control No. _90/006,831_   Attachment to Paper No. _20050823_.

Art Unit _3992_.

See attached "Examiner's Statement of Reasons for Patentability / Confirmation."

ST. JOHN COURTENAY III
PRIMARY EXAMINER

(Examiner's Signature)

PTOL-476 (Rev. 03-98)

Examiner's Statement of Reasons
for Patentability and/or Confirmation

The following is an Examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding.

Summary

At the outset, it is noted that the previous Examiner of record admitted in making the rejection under 35 U.S.C. §103 of independent claims 1 and 6 that the cited four-way combination of the patent owner's admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II, does not explicitly teach a method that enables interactive processing of an object:

> The combination of patentee's admitted prior art in view of Berners-Lee, Raggett I, and Raggett II <u>does not explicitly teach a method that 'enables interactive processing of said object.</u>' The combination teaches a method that embeds static objects, as opposed to dynamic objects, with distributed hypermedia documents [see Office Action mailed Oct. 16, 2004, page 6, lines 18-21].

The previous Examiner then applied a fifth reference (Toye) to the combination and asserted:

> Toye on the other hand discloses a distributed hypermedia system in which a hypermedia browser allows a user to **interactively process** an object embedded within a distributed hypermedia document (See Toye: p. 40 description of NoteMail, particularly p. 40, col. 2, first paragraph).

An Examiner's statement of reasons for confirmation and/or patentability is set forth below in the form of a reply to the Patent Owner's detailed arguments of record. The Patent Owner's arguments are shown in *italics* below. In addition, the "DX37" Viola code has been considered by the PTO as a prior art publication. The Viola code issue is addressed at the end of the response to the Patent Owner's detailed argument.

Examiner's Response to Patent Owner's Detailed Argument

PART I. The establishment of a prima facie case of obviousness requires that all the claim limitations must be taught or suggested by the prior art. MPEP §2143.03

None of the references of the proposed combination, when considered either individually or collectively, teach or suggest the claimed features of the Applicants' invention. Accordingly, a prima facie case of obviousness has not been established.

a. There is no suggestion or teaching in either Toye, the admitted prior art (Mosaic), Berners-Lee, Raggett I or Raggett II of automatically invoking an external application to execute on a client computer, when an embed text format is parsed, to display and interactively control an object in a display window in a hypermedia document received over a network from a network server, being displayed in a browser-controlled window on the client computer.

In response, the Examiner finds the Patent Owner's argument I(a) persuasive for at least the following reasons:

As acknowledged by the previous Examiner, the cited four-way combination of the patent owner's admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II, "does not explicitly teach a method that 'enables **interactive processing** of said object.' The combination teaches a method that embeds static objects, as opposed to dynamic objects, with distributed hypermedia documents" [see Office Action mailed Oct. 16, 2004, page 6, lines 18-21].

During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).

Accordingly, with respect to the scope of the claimed "interactive

processing," the Examiner must apply the broadest reasonable interpretation

consistent with the specification.

To be consistent with the specification, the claimed "interactive processing"

necessarily requires some capability of ongoing real-time manipulation and

control by the user of the object displayed within the browser-controlled

window.

In particular, the claimed "interactive processing," when properly construed

in a manner consistent with the specification, requires:

> "**Interprocess communication** between the **hypermedia browser** and the
> **embedded application program** is **ongoing** after the program object has
> been launched" [see instant '906 patent, col. 7, lines 1-4].

Static objects disclosed by the prior art of record, such as graphical images

of mathematical formulas (see e.g., the use of the EMBED tag in Raggett I at

the bottom of page 6) are incapable of providing "interactive processing" as

required by the instant '906 claims because the application that renders the

static object terminates after the rendering step and prior to the complete

display of the web page.

With respect to prior art of record that uses colored or otherwise identifiable

active areas superimposed on a coordinate grid of a static image map (e.g.,

see the use of the "ismap" attribute and "<figt " tag in Raggett I - see

"Active areas" on page 13; see also U.S. Patent 4,847,604 to Doyle), these

"map" images are created by an executable rendering application that

generates the static "map" image and then <u>terminates</u> prior to the complete display of the web page.

The aforementioned prior art "map" images are static in the sense that the user cannot interactively change the appearance of the "map" image, but are also active in the sense that the user can interactively click on an active region or area within the map and trigger a URL that is invoked by the web browser application.

Significantly, with respect to active maps and the like, it is the <u>browser application</u> (i.e., not an executable application <u>separate</u> from the browser application) that makes the active areas "interactive" by waiting for user input, typically in the form of a mouse click [see e.g., Raggett I, page 13, 1st sentence under "Active areas"].

Because the aforementioned prior art executable rendering applications <u>terminate</u> after generating the static image, it is axiomatic that there is no ongoing interprocess communication between the browser and the executable application. Therefore, there is no <u>ongoing real-time manipulation and control by the user</u> of the object displayed within the browser-controlled window, as required by the instant '906 claims when the claim element "interactive processing" is properly construed in a manner consistent with the specification of the '906 patent.

The instant '906 patent specification makes liberal use of the term "interactive" as being synonymous with "manipulate" and "control" in an ongoing real-time setting:

See '906 Patent, col. 6, lines 40-47:

> Thus, it is desirable to have a system that allows a user at a small client
> computer connected to the Internet to locate, retrieve and **manipulate** data
> objects when the data objects are bandwidth-intensive and compute-
> intensive. Further, it is desirable to allow a user to **manipulate** data objects
> in an **interactive** way to provide the user with a better understanding of
> information presented and to allow the user to accomplish a wider variety of
> tasks.

See '906 Patent, col. 6, lines 50-62:

> The present invention provides a method for running embedded program objects in a
> computer network environment. The method includes the steps of providing at least
> one client workstation and one network server coupled to the network environment
> where the network environment is a distributed hypermedia environment;
> displaying, on the client workstation, a portion of a hypermedia document received
> over the network from the server, where the hypermedia document includes an
> **embedded controllable application; and interactively controlling** the
> **embedded controllable application** from the client workstation via communication
> sent over the distributed hypermedia environment.

See '906 Patent, col. 6, lines 63-67 cont'd col. 7, lines 1-6:

> The present invention allows a user at a client computer connected to a network to
> locate, retrieve and **manipulate objects** in an **interactive way**. The invention not
> only allows the user to use a hypermedia format to locate and retrieve program
> objects, but also allows the user to **interact** with an application program located at a
> remote computer. **Interprocess communication between the hypermedia
> browser and the embedded application program is ONGOING after the
> program object has been launched**. The user is able to use a vast amount of
> computing power beyond that which is contained in the user's client computer.

See '906 Patent, col. 9, line 66 cont'd col. 10, lines 1-16:

> After application client 210 receives the multidimensional data object 216,
> application client 210 executes instructions to display the multidimensional embryo
> data on the display screen to a user of the client computer 200. The user is then able
> to **interactively operate controls to recompute different views for the image
> data**. In a preferred embodiment, a control window is displayed within, or adjacent
> to, a window generated by browser client 208 that contains a display of hypermedia
> document 212. An example of such display is discussed below in connection with
> FIG. 9. Thus, **the user is able to interactively manipulate a multidimensional
> image object** by means of the present invention. In order to make application client
> 210 integral with displays created by browser client 208, both the browser client and

the application client must be in communication with each other, as shown by the arrow connecting the two within client computer 200. The manner of communication is through an application program interface (API), discussed below.

See '906 Patent, col. 10, lines 47-56:

In the present example where a multidimensional image object representing medical data for an embryo is being viewed, application server 220 could perform much of the viewing transformation and volume rendering calculations to **allow a user to Interactively view** the embryo data at their client computer display screen. In a preferred embodiment, application client 210 **receives signals from a user input device** at the user's client computer 200. **An example of such input would be to rotate the embryo image from a current position to a new position from the user's point of view**.

See '906 Patent, col. 16, lines 18-20.

FIG. 9 is a screen display of the invention showing an **interactive application object (in this case a three dimensional image object)** in a window within a browser window. In FIG. 9, the browser is NCSA Mosaic version 2.4. The processes VIS, Panel and VRServer work as discussed above. FIG. 9 shows screen display 356 Mosaic window 350 containing image window 352 and a portion of a panel window 354. Note that image window 352 is within Mosaic window 350 while panel window 354 is external to Mosaic window 350. Another possibility is to have panel window 354 within Mosaic window 350. By **using the controls** in panel window 354 **the user is able to manipulate the image within image window 352 in REAL TIME to perform such operations as scaling, rotation, translation, color map selection, etc.**

The Examiner submits that this interpretation is reasonable and also consistent with the interpretation that those skilled in the art would reach. See In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999), "The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach."

The above discussion does not mean that the use of static objects precludes interactivity. One may reasonably argue that the use of static graphical images that contain superimposed active areas or sections (e.g., through the use of the "ismap" attribute and "<figt " tag in Raggett I, *supra*) enable "interactive processing" in the sense that when a user clicks the mouse over an active area, a URL call to a server is generated by the browser; however, this is not the same kind of "interactive processing" required by instant claims 1 and 6 of the '906 patent.

In the case of the Raggett I "*ismap*" attribute, Raggett explicitly discloses:

> "The *ismap* attribute causes the browser to send mouse clicks on the figure, back to the server using the selected coordinate scheme" [see Raggett I, page 13, 1st sentence under "Active areas"].

As is clearly indicated by Raggett I, it is the browser application that responds to the mouse click that occurs over an active region identified by a coordinate scheme superimposed over a static graphical image. Thus, in the case of Raggett I and active map areas in general (e.g., using the "ismap" attribute and "<figt " tag), it is the browser application that provides the interactivity.

In contrast, the instant '906 claims explicitly require the "interactive processing" to be enabled by an "executable application" that is a separate application from the browser application.

The instant claimed '906 "executable application" that provides the claimed "interactive processing" is invoked not in response to a user event detected by the browser (as in the case of Raggett I, *supra*), but rather in response to

the browser application parsing an "embed text format" (i.e., an "EMBED"
tag, see col. 12, line 60, '906 patent) that is detected within the hypermedia
document when the hypermedia document is first loaded by the browser.

Significantly, the instant claimed "interactive processing" of the '906 patent
begins at the moment the browser application parses an "embed text
format" detected within the hypermedia document. The web browser
invokes the claimed "executable application" immediately after an "EMBED"
tag is parsed and before the hypermedia document is completely displayed
in the browser-controlled window. The invoked "executable application"
enables the claimed "interactive processing."

Instant '906 independent claims 1 and 6 therefore require an operative
coupling between the claimed "executable application" and the claimed
"interactive processing" such that the claimed "interactive processing" must
be enabled by an "executable application" that meets five explicitly claimed
requirements:

1. The executable application must be external to the first distributed
   multimedia document.

2. The executable application must be automatically invoked by the
   browser application when the "embed text format" is parsed by the
   browser application.

3. The executable application must execute on the client workstation.

4. The executable application must display the object within the display
   area created at the first location within the portion of the first
   distributed hypermedia document being displayed in the first browser-
   controlled window.

5. The executable application must enable interactive processing of the object within the display area created at the first location within the portion of the first distributed hypermedia document being displayed in the first browser-controlled window.

Because the admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II four-way combination displays or renders a static image and then terminates, "interactive processing" as used in the instant claims is precluded by the four-way combination.

As discussed *supra*, a proper construction of the claimed "interactive processing" necessarily requires some capability of ongoing real-time manipulation and control by the user that is applied to the object displayed within the first browser-controlled window. It is axiomatic that an executable application that terminates is incapable of providing the type of "interactive processing" required by instant '906 independent claims 1 and 6.

In particular, executable application requirement #5, *supra,* is clearly not met by the cited four-way combination of admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II, with respect to the operative coupling required between the claimed "executable application" and claimed "interactive processing."

THE TOYE REFERENCE

The Examiner finds the Patent Owner's argument (as supported by the Felten II affidavit, §§33-35) persuasive that Toye teaches the use of an image or icon that represents a file or data object displayed within a "NoteMail" page, and that the image or icon consists of a "static snapshot" of the external content. Interactive processing is enabled only after a user manually clicks on the "static snapshot" image to launch an external editor program.

Toye discloses <u>manual selection</u> by the user to enable interactivity:

> "Subsequently <u>selecting</u> the displayed data <u>with a mouse</u> will **restart** the original application, so that the data can be edited or updated without leaving the notebook environment" [See Toye, p. 40, 2nd column, 2nd paragraph].

Significantly, Toye discloses functionality similar to a file manager:

> "The functionality is similar to opening a file using the Macintosh Finder and automatically invoking the appropriate application for processing that file" [p. 40, 2nd column, 2nd paragraph].

The Examiner concurs with the Patent Owner's contention that no ongoing interaction with the data can occur unless the "appropriate application" is manually <u>started</u> or <u>restarted</u> by the user to enable interaction with the data displayed as a static "snapshot image" or icon within a "NoteMail" page.

The Examiner concurs that automatic invoking, as taught by Toye, is the result of manual user selection with a mouse of a "static snapshot" image that automatically launches the "appropriate application" to edit the data object. This approach appears to be similar to the method employed by conventional file manager programs that implement file type association to

invoke the appropriate application when the user clicks on the filename or file icon.

Accordingly, the Examiner concurs with the Patent Owner that Toye teaches away from automatic invocation of an external application when a document is _parsed_ to enable interactive processing of the object, and instead teaches that an object must be _selected by a mouse_ to invoke an application to enable interactive processing.

> b. There is no suggestion or teaching in either Toye, the admitted prior art (Mosaic), Berners-Lee, Raggett I or Raggett II of parsing an embed text format at a first location in the hypermedia document and displaying the object and enabling interactive processing of the object within a display area created at the first location within the portion of the hypermedia document being displayed.

In response, the Examiner finds the Patent Owner's argument I(b) persuasive for at least the following reasons:

The Examiner concurs with the Patent Owner's argument regarding the Raggett I & II EMBED tag that is located at a first location in a hypermedia document. When the EMBED tag is parsed, a rendering application is invoked that returns a STATIC graphical image to be displayed within the browser window at the first location, and then the rendering application terminates prior to the complete display of the web page.

Because the application <u>terminates</u> after rendering the graphical object, it is clear that a terminated rendering application is incapable of providing the claimed "interactive processing," as discussed *supra*.

With respect to the cited Toye reference, the Examiner has considered Professor Felton's affidavit ("Felton II" at paragraph 38) supporting the Patent Owner's contention that Toye teaches away from the proposed combination because existing editor applications at the time of the '906 invention <u>were designed to run in their own dedicated windows</u>.

Whether Toye teaches away with respect to the superimposed display of the X-server output within the "NoteMail" viewer is a close question [see Toye, p. 40, 2nd paragraph, i.e., "any application that displays through an X-server can insert its output (audio, video, or graphics) dynamically onto a notebook page through an embedded 'virtual window.' "]. The question turns upon whether the Toye "NoteMail" viewing system is equivalent to the browser claimed in the '906 patent and also whether the "embedded virtual window" disclosed by Toye is equivalent to displaying an object within a display area of the "browser-controlled window" claimed in the '906 patent [claims 1 & 6].

As disclosed by Toye, the "NoteMail" system is a hybrid tool that combines "the functions of an engineering notebook, hypermedia browser and authoring environment, mail tool, and file application manager" [Toye, p. 40, col. 1, 3rd paragraph]. With respect to the first prong (i.e., whether the Toye "NoteMail" viewing system is equivalent to the browser claimed in the '906 patent) reasonable arguments may be proffered on both sides.

One might reasonably conclude that the Toye "NoteMail" system is a specialized hypermedia browser, i.e., a species of the genus of hypermedia browsers. "A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus." The species in that case will anticipate the genus. In re Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

On the other hand, if the engineering notebook, authoring environment, mail tool, and file application manager functions are the dominant functions of the Toye "NoteMail" viewer, then one could reasonably argue that Toye does not teach the hypermedia browser required by the instant '906 claims when the claims are properly interpreted by applying the broadest reasonable interpretation consistent with the specification. However, the issue of how the instant '906 "hypermedia browser" is construed is not dispositive.

The second prong of inquiry is also a close question, i.e., whether the "embedded virtual window" disclosed by Toye is equivalent to displaying an object at a first location within the display area of the "browser-controlled window" as claimed in the '906 patent. Toye provides further insight regarding the implementation of the "embedded virtual window" by explicitly citing the MediaMosaic article [see Toye, p. 40, col. 2, 3rd paragraph, i.e., "We are aware of only one other multimedia editor with such an architecture, MediaMosaic (22)"].

While Professor Felton's affidavit is technically correct in asserting that existing editor applications at the time of the '906 invention were designed

to run in their own dedicated windows, the "virtual window" system disclosed in the MediaMosaic article provides further implementation details. Accordingly, MediaMosaic has been considered by the Examiner as extrinsic evidence to aid in the interpretation of the cited Toye reference. [1]

Felton II at 38 argues:

> 38. Indeed, Toye teaches the use of external editor programs that have not been modified from their standard versions. (See, e.g., Toye at p. 40, col. 2, first full paragraph: "any application that displays through an X-server") Such unmodified programs are not suitable for use within an enclosing document display, because the unmodified programs conventionally display menus and button bars at the top, and other graphical elements around their edges. External application windows with these elements on their borders cannot naturally be displayed within a document display; at most they could be displayed in a window area elsewhere in a windowing environment, as discussed in the previous paragraph. To enable a reasonable editing experience within a document display, the applications would have to be modified; but Toye teaches that they are not modified.

Page 136 of the MediaMosaic article reveals how embedded virtual screens (i.e., embedded virtual windows) were implemented at the time of the Toye reference. MediaMosaic reveals that a virtual screen is a pseudo root window to map X clients so that a portion of their output screens can be embedded in a document as a general media container." Virtual screens use a "pseudo server" that "intercepts and modifies X protocols between X clients and the X server." The protocol essentially "reparents clients to a designated window

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[1] Lin, J.K., "MediaMosaic – A Multimedia Editing Environment", Proc. 5th Annual Symposium on User Interface Software and Technology, Monterey CA, Nov. 15-18, 1992 (published by ACM Press).

instead of the root window of the real screen." MediaMosaic creates a virtual screen for a media client and embeds it in a document. MediaMosaic further creates a user-movable and resizable "Viewport" (X Window) for each embedded virtual screen.

The embedded virtual screen is mapped to its corresponding "Viewport" before it is inserted into a document. Text in the document is automatically reformatted around the inserted media displayed within the "Viewport." Significantly, "The mechanism used by MediaMosaic to contain general media is to directly embed them in documents by their original displaying tools" [MediaMosaic, p. 138, 1st paragraph under "5 Duplicated and Full Views].

It is reasonable to assume that Toye uses the MediaMosiac "virtual screen" embedding method because Toye explicitly states that MediaMosaic has the same architecture (i.e., as "NoteMail") [see Toye, p. 40, col. 2, §2].

Prof. Felton's assertion that the applications would have to be modified "because the unmodified programs conventionally display menus and button bars at the top, and other graphical elements around their edges" [see Felton II at 38] is contravened by the extrinsic evidence that MediaMosaic uses the original unmodified rendering tools (i.e., the associated editing applications) to directly embed output media in documents. MediaMosiac simply redirects a portion of the application display output (containing the object to be embedded) to a "virtual screen" associated with a mapped "Viewport."

MediaMosiac appears to operate by cropping out the portion of the application display output that contains the aforementioned display menus, button bars, and other graphical elements around the edges that are normally displayed in the full screen mode of an editing program. Only the embedded object of interest is displayed within the virtual screen associated with the mapped "Viewport" and no modification of the rendering editing application appears to be required [e.g., see Fig. 4, p 139].

MediaMosaic provides an alternate user-selectable full view mode for editing embedded media, as manual resizing of a Viewport window is an awkward way to access the full controls of an associated editing application [see Fig. 5, p. 139].

MediaMosaic therefore provides a mechanism to allow users to embed data objects displayed by different editing applications into one document. Significantly, the system disclosed by MediaMosaic provides the capability to "tailor" (i.e., edit or control) the individual embedded data objects <u>by direct manipulation</u> [MediaMosaic, p. 140, 1st col., §2].

MediaMosaic does enable interactive control and manipulation of objects embedded in what arguably may be construed to be a "browser-controlled window," BUT ONLY AFTER USER INTERVENTION, such as by making a selection with a mouse.

MediaMosaic explicitly discloses: "<u>users</u> can switch media modes <u>by selecting</u> 'Full-View Editing' or 'Embedded-View Editing' from the pull-down menu."

Likewise, Toye teaches that interactive processing is enabled <u>only after a</u>
<u>user manually clicks on the "static snapshot" image to launch an external</u>
<u>editor program</u>, as discussed *supra.*

Significantly, the prior art approaches of both Toye and MediaMosaic require
user intervention to launch an executable application to enable interactive
processing. In contrast, the instant '906 claims do not require user
intervention to launch the executable application that enables the claimed
"interactive processing." Accordingly, for at least this reason, Toye does not
anticipate nor render obvious the instant '906 invention.

> *c. Because the claim limitations are not taught or suggested by*
> *the cited references, the combination proposed in the rejection*
> *would not include the limitations of claims 1 and 6.*

In response, the Examiner finds the Patent Owner's argument I(c)
persuasive for at least the following reasons:

To establish *prima facie* obviousness of a claimed invention, all the claim
limitations must be taught or suggested by the prior art. <u>In re Royka</u>, 490
F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be
considered in judging the patentability of that claim against the prior art." <u>In</u>
<u>re Wilson</u>, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The Examiner concurs with the Patent Owner's argument that the proposed
five-way combination of references set forth in the last office action does not
show automatic invocation of the executable application that enables
interactive processing when the hypermedia document is parsed, as claimed.

As persuasively argued by the Patent Owner, the proposed five-way combination of references would "not automatically invoke an external application to enable interactive processing within a display area of a hypermedia document being displayed by the browser because the cited four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II teaches that external data is rendered to a static bit map that is displayed by the browser.

In contrast, Toye teaches that external data is displayed as a "static snapshot" (i.e., representing a data object) within a NoteMail page <u>that must be selected by a mouse to launch an editor application in a separate window</u>" [see Felten II, at paragraph 47]. Thus, Toye clearly requires user intervention to enable interactive processing.

For the aforementioned reasons, the Examiner agrees that all claim limitations are not taught nor fairly suggested by the combination of cited references. Accordingly, the combination proposed in the rejection does not include all the limitations of claims 1 and 6 and a *prima facie* case of obviousness has not been established.

> PART II. The establishment of a prima facie case of obviousness requires that the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose. MPEP §2143.01. The proposed combination of Toye with the combination of

> *Mosaic, Berners-Lee, Raggett I and II would change the operation of the latter combination and render it inoperable for its intended purpose. Accordingly, a prima facie case of obviousness has not been established.*

> *a. The combination proposed in the Office Action contradicts a fundamental principle of operation of the Mosaic, Berners-Lee, Raggett I and II combination requiring that the images, rendered when the Raggett embed tag is parsed, be static images.*

In response, the Examiner finds the Patent Owner's argument II(a) persuasive for at least the following reasons:

As noted *supra,* the previous Examiner of record admitted in making the rejection under 35 U.S.C. §103 of independent claims 1 and 6 that the cited four-way combination of the patent owner's admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II, *"does not explicitly teach a method that enables interactive processing of said object. The combination teaches a method that embeds static objects, as opposed to dynamic objects, with distributed hypermedia documents"* [see Office Action mailed Oct. 16, 2004, page 6, lines 18-21].

The Examiner concurs with the Patent Owner's argument that the addition of the Toye reference is a contradiction, and therefore teaches away, from the four-way combination of the patent owner's admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II, because, as the Patent Owner points out, combining Toye with aforementioned four-way combination "would

change the principle of operation of the Mosaic, Berners-Lee, Raggett I and II combination, and render it inoperable for one of its intended purposes.

If the displayed static image of the Mosaic, Berners-Lee, Raggett I and II combination were modified to be dynamic as suggested by the rejection, then the intended purpose of allowing the image returned by the Raggett rendering function to be compatible with the 'ismap' attribute of the "<fig " tag would be rendered inoperable" [see Patent Owner's response, Oct. 12, 2004, page 15, last paragraph].

For at least the aforementioned reason, the cited Toye reference teaches away from the four-way combination of the patent owner's admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II.

> *b. The combination proposed in the Office Action would change the Mosaic, Berners Lee, Raggett I and II combination from being a distributed system, which is a basic principle of its operation and an intended purpose.*

In response, the Examiner finds the Patent Owner's argument II(b) persuasive for at least the following reasons:

The Patent Owner points out that "the Mosaic [APA], Berners-Lee, Raggett I and II combination was designed to operate as a distributed system where objects may be stored anywhere on the Internet and retrieved by utilizing a browser application, by simply clicking on a link in a document displayed by the browser, to access another document located anywhere on the Internet

[see Patent Owner's response, Oct. 12, 2004, page 16, third paragraph from the bottom of the page].

The Patent Owner further observes: "In contrast, Toye teaches a system for collaborative editing of engineering documents within an engineering team, using a single object-oriented database (DIS) to store documents" [see Patent Owner's response, Oct. 12, 2004, page 16, second from last paragraph].

The Patent Owner further concludes that "any attempt to combine the centralized storage of referenced objects taught by Toye with the Mosaic, Berners-Lee, Raggett I and II combination would change the basic principle of operation of the combination being modified. A fundamental principle of operation and an intended purpose of the Mosaic, Berners-Lee. Raggett I and II combination is to provide a distributed system that allows objects to be stored anywhere on the Internet. A combination with Toye would turn that distributed system into a centralized database system, thereby destroying its distributed nature. Such a fundamental change teaches away from any combination of the Mosaic, Berners-Lee, Raggett I and II distributed system and the Toye centralized system" [see Patent Owner's response, Oct. 12, 2004, page 17, second from last paragraph].

The Examiner concurs with the Patent Owner that the centralized collaborative access system disclosed by Toye teaches away from the distributed system that allows objects to be stored anywhere on the Internet, as taught by the four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II. The Examiner agrees that the centralized database

approach of Toye has no applicability to the distributed system of the cited Mosaic (APA), Berners-Lee, Raggett I and II combination, and thus Toye teaches away from the four-way combination. A *prima facie* case of obviousness may be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. In re Geisler, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997).

The Examiner finds that the proposed modification would render the prior art invention being modified (i.e., the four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II) unsatisfactory for its intended purpose if combined with Toye. The purpose of the Toye centralized collaborative database (i.e., "a collaborative tool for creating, viewing, and sharing multimedia engineering documents in a network environment", see Toye p. 40, col. 1) is distinctly different than the purpose of the cited four-way combination browser that can access another document located anywhere on the Internet.

In contrast, Toye explicitly discloses: "Applications can now reside anywhere on the Internet" as opposed to accessing documents located anywhere on the Internet, as taught by the four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II [see Toye, p. 40, col. 2, 2nd paragraph, last line].

Accordingly, Toye teaches away from the cited four-way combination by rendering it unsatisfactory for its intended purpose. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or

motivation to make the proposed modification. In re Gordon, 733 F.2d 900,
221 USPQ 1125 (Fed. Cir. 1984).

Because the system of Toye relies upon a centralized collaborative database
as a fundamental principle of operation, and the four-way combination of
Mosaic (APA), Berners-Lee, Raggett I and II teaches the use of a distributed
system that allows objects to be stored anywhere on the Internet, the
proposed modification by Toye of the prior art (i.e., Mosaic (APA), Berners-
Lee, Raggett I and II) would clearly change the principle of operation of the
prior art invention being modified. If the proposed modification or
combination of the prior art would change the principle of operation of the
prior art invention being modified, then the teachings of the references are
not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d
810, 123 USPQ 349 (CCPA 1959).

> *c. The combination proposed in the Office Action would change
> the Mosaic, Berners-Lee, Raggett I and II combination from a
> system intended to give the document author control over the
> user's browsing experience to a system which causes the
> document author to lose that control.*

In response, the Examiner finds the Patent Owner's argument II(c)
persuasive for at least the following reasons:

As pointed out by the Patent Owner, the Toye reference teaches a system
that is appropriate for a collaborative workgroup where the participants
know and trust each other and where all authorized users may access and
modify the collaborative document after its creation.

The Examiner concurs with the Patent Owner's argument that the publish-once/view-many paradigm that preserves the data and referential integrity (i.e., unidirectional links) defined by the web document author (i.e., as taught by the four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II) is destroyed by the modification suggested by the Toye reference.

The addition of the Toye reference clearly teaches away from the four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II, because Toye renders the prior art invention being modified unsatisfactory for its intended purpose of preserving the data and referential integrity (i.e., unidirectional links) defined by the web document author. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d at 900.

> *PART III. The obviousness rejection is based on a false premise and therefore reaches a false conclusion.*
>
> *a. Toye does not disclose a distributed hypermedia system in which a hypermedia browser allows a user to interactively process an object embedded within a distributed hypermedia document.*

As disclosed by Toye, NoteMail "combines the functions of an engineering notebook, hypermedia browser, and authoring environment, mail tool, and file application manager" [see Toye, p. 40, col. 1].

Toye implements a Distributed Information Service (DIS) that Toye defines
as follows:

> Conceptually, DIS provides <u>a centralized information storage and
> management service for all the data associated with a design</u>: CAD files, e-
> mail messages, specifications, simulation results, and so forth. In practice,
> most data remains physically under the control of the application that created
> it; a persistent object is created in DIS to server as a reference pointer or
> "handle" [see Toye, page 40, 2nd column, 2nd from last paragraph].

However, the Patent Owner argues:
> A distributed hypermedia system "is a distributed" system because data
> objects that are imbedded within a document may be located on many of the
> computer systems connected to the Internet." ['906 at col. 5, lines 25-38].

The Felton II affidavit further argues:
> Toye does not teach the use of a 'distributed hypermedia environment,' as
> that term is used in the '906 claims. The environment provided by Toye is not
> distributed in the sense of the '906 claims, since it relies on the centralization
> of a user's document storage in one place. Toye teaches away from the use of
> a distributed hypermedia environment." (see Felton II, paragraph 25).

The above characterization in Felton II (i.e., "Toye teaches away from the
use of a distributed hypermedia environment") is somewhat counterintuitive
because Toye teaches the use of combined functions that explicitly include
the functions of a "hypermedia browser," and Toye also uses the term
"Distributed" in labeling the "Distributed Information Service" [see Toye, p.
40, col. 2].

It appears that the moniker "Distributed" may have been used in labeling
Toye's "Distributed Information Service" because centralized information and
management services may be <u>distributed</u> to users, e.g., via "persistent
objects" that are created in DIS to serve as a reference pointers or handles
[see Toye, p. 40, col. 2, 2nd from last paragraph].

The Examiner does not agree with the Patent Owner's assertion that "NoteMail" pages are "not analogous" to Web-style hypermedia documents [see p. 21, 4th paragraph].

Toye explicitly discloses that NoteMail "combines the functions of an engineering notebook, <u>hypermedia browser</u>, and authoring environment, mail tool, and file application manager" [see Toye, p. 40, col. 1].

Toye explicitly discloses the use of "hyper-documents" in the context of an "Internet-wide information web":

> Messages are inserted in chronological order as pages
> in an electronic design notebook". These pages can be
> marked up and annotated; items of information can be
> linked to related items on other pages. The result is a
> personal <u>hyper-document</u> that captures and structures an
> engineer's knowledge about a project. Selected information
> can be shared by e-mailing pages to other
> engineers or to a central project repository, complete with
> embedded reference pointers and hyper-links. What
> emerges is an <u>Internet-wide information web</u> that
> documents and organizes the shared understanding of an
> entire engineering team [Toye, p. 40, col. 1].

While it is clear that Toye's spatial arrangement of information items on the "NoteMail" page is implemented with a new "Format" data type [e.g., see Toye, p. 40, col. 2, last paragraph], and is therefore different than the prior art Mosaic (APA), Berners-Lee, Raggett I and II combination, the Examiner does not agree with the Patent Owner's sweeping statement that "NoteMail" pages are not even analogous to Web-style hypermedia documents.

However, the Examiner does find the Patent Owner's final argument to be persuasive and dispositive regarding argument III(a):

> Also, there is no teaching in Toye of interactively processing an object
> embedded in a hypermedia document. Toye teaches that data displayed in a
> NoteMail page must be selected via a mouse click by the user to restart an
> application in order to update and edit data. The type of application described
> in Toye is any application that displays through an X-server. (Toye page
> 40, second column, first full paragraph). There is no teaching of modifying
> such an application to process an object embedded in a hypermedia
> document. Further, Toye teaches that most data remains physically under the
> control of the application that created it, suggesting that the data must be
> processed using the normal interface for the application. [Felten 11, at
> paragraphs 36-37].

The Examiner concurs because Toye teaches that data displayed in a

"NoteMail" page must be selected via a mouse click by the user to restart an

application in order to update and edit the data. Therefore, Toye teaches

away from the operative coupling between the "executable application" and

the "interactive processing" required by the instant '906 patent claims.

Furthermore, Toye teaches that "automatic invoking" of the "appropriate

application" is performed by selection, and not by parsing. Toye teaches that

notebook data is displayed as a data object or filename that must be

selected by a mouse to launch an appropriate application in a separate

window" [see Toye page 40, 2nd column, paragraph 2; see also page 36, 2nd

column, last paragraph, i.e., " ... ability to construct hyper-documents

containing bitmaps, video, and audio"; see also Felten II, at paragraph 47].

Significantly, Toye appears to merely disclose a conventional system for

invoking appropriate applications by standard prior art file association

techniques, such as invoking the appropriate application based upon the file

extension (e.g., when the user clicks and selects a *.doc filename or

corresponding file icon and this user action automatically invokes the

appropriate word processor). See also Toye: "The functionality is similar to

opening a file using the Macintosh Finder and automatically invoking the appropriate application for processing that file" [p. 40, 2nd column, 2nd paragraph].

> b. *There is no teaching in Toye of a dynamic object that would make obvious modifying the static image taught by the combination of the admitted prior art (Mosaic), Berners Lee, and Raggett I and II into a dynamic image.*

In response, the Examiner finds the Patent Owner's argument III(b) persuasive for at least the following reasons:

The Examiner notes that the term "dynamic object" is not explicitly used in the Toye disclosure, nor is the term used within the instant '906 claims. It appears the previous Examiner is interpreting the Toye reference to teach the use of an embedded object that is dynamic in the sense that the embedded object may be interactively changed by the user while it is being displayed.

The Examiner concurs and finds dispositive the Patent Owner's argument that the "dynamic objects" taught by Toye are "activated by the user clicking on a static "snap shot" image or icon displayed within a NoteMail page" [see Patent Owner's response, received Oct. 12, 2004, p 22].

The Examiner concurs that the link between the "dynamic object" allegedly taught by Toye and the application to process the "dynamic object" is stored in an external centralized database, and not within the "NoteMail" page itself (as contrasted with the use of the EMBED tag disclosed by Raggett I that provides the link to a rendering application, discussed *supra*; see Raggett I, p. 6).

Accordingly, Toye fails to teach or fairly suggest an ongoing real-time modification or control by a user of a displayed object shown within a browser-controlled window, as performed by an "executable application" that is invoked by parsing an "EMBED" tag to enable "interactive processing" of the type claimed in the '906 patent.

> *PART IV. There is no motivation or teaching in the cited references to combine the references to make the claimed invention obvious.*
>
> *a. The language in Toye regarding openness and flexibility" cited by the examiner teaches away from a combination that would make the claims obvious.*

In response, the Examiner finds the Patent Owner's argument IV(a) persuasive for at least the following reasons:

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." In re Linter, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

In the rejection set forth on page 6 of the Office Action mailed Oct. 16, 2004, the previous Examiner asserts that the modification of the four-way combination of the patent owner's admitted prior art (APA), Berners-Lee, Raggett I, and Raggett II, would be motivated based upon "Toye's teaching that its architecture provides openness and flexibility":

> The combination of patentee's admitted prior art in view of Berners-Lee, Raggett I, and Raggett II **does not explicitly teach a method that 'enables interactive processing of said object.'** The combination teaches a method that embeds static objects, as opposed to dynamic objects, with distributed hypermedia documents.
>
> Toye on the other hand discloses a distributed hypermedia system in which a hypermedia browser allows a user to **interactively process** an object embedded within a distributed hypermedia document (See Toye: p. 40 description of NoteMail, particularly p. 40, col. 2, first paragraph).
>
> It would have been readily apparent to a skilled artisan to modify the method discussed above, combining the teachings of the admitted prior ad in view of Berners-Lee, Raggett I, and Raggett II, by further modifying the combination's static embedded object to be a dynamic embedded object as taught by Toye. **Such a further modification would have been apparent based on Toye's teaching that its architecture provides openness and flexibility** (See Toye: p. 40 col. 2 second complete paragraph).

The support for the "openness and flexibility" motivation relied upon the previous Examiner is taken from the following section of the Toye reference [see p. 40, 2nd column, 2nd and 3rd complete paragraphs]:

> Another interesting feature of NoteMail is the **open architecture** of its viewer. Unlike most other engineering notebooks and multimedia authoring environments, any application that displays through an X-server can insert its output (audio, video or graphics) dynamically onto a notebook page through an embedded "virtual window". When a data object or file is **selected** for inclusion in the

notebook, the system **will automatically invoke the appropriate application** for displaying that item in the notebook. If the needed application is not locally resident (a likely occurrence in the case of MIME external body references), it will be located and run remotely over the network. Subsequently selecting the displayed data with a mouse will restart the original application, so that the data can be edited or updated without leaving the notebook environment. **The functionality is similar to opening a file using the Macintosh Finder and automatically invoking the appropriate application for processing that file.** However, applications can now reside anywhere on the Internet.

We are aware of only one other multimedia editor with such an architecture, MediaMosaic [22]. Other engineering notebook projects, by contrast lack this **openness and flexibility.** For example, the Virtual Notebook System [6] can display only static bitmaps; GE's Electronic design Notebook [34], which is built on FrameMaker, can run only those applications whose output formats are compatible with the handful of input formats that FrameMaker accepts.

The Patent Owner argues: "the general and nebulous Toye language regarding 'openness and flexibility' is not related to any possible motivation to combine the references" [see Patent Owner's response received Oct. 12, 2004, p. 23].

In response, the Examiner concurs with the Patent Owner's contention that the "openness and flexibility" motivation applied by the previous Examiner is general and nebulous, for the following reasons:

"Openness and flexibility" is supported by the term "open architecture" in paragraph 2, *supra*, describing a "virtual window" for displaying the output of any application (i.e., suggesting "flexibility") that can display its output through an X-Server. As disclosed by Toye, "any application that displays through an X-server can insert its output (audio, video, or graphics) dynamically onto a notebook page through an embedded 'virtual window' [see Toye, p. 40, 2nd column, paragraph 2]. Toye also teaches a "flexible" system in the sense that if a needed application is not locally resident, it will be "located and run remotely over the network" [see Toye, p. 40, 2nd column, 2nd paragraph].

With respect to the four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II, it is conceded that the section of Toye cited by the previous Examiner would likely provide a motivation to a skilled artisan to modify the four-way combination for the purpose of making it compatible, e.g., with applications that display through an X-Window system, using an X-server.

It is also conceded that, after a user makes a manual selection of a "data object or file," Toye teaches that a local or remote editing application is invoked that can display dynamic objects such as audio and video that may be displayed as an embedded object within a notebook page using the disclosed "virtual window."

However, there is no suggestion to modify the four-way combination to allow a user to interactively process an object embedded within a distributed hypermedia document in accordance with the type of "interactive processing" recited in claims 1 and 6 of the instant '906 patent.

While Toye certainly teaches that the user may select a data object or file and "automatically invoke the appropriate application for displaying that item in the notebook" (as typically performed using file associations in a conventional file manager program) such interactivity (as taught by Toye) can only be initiated by a manual selection performed by the user (i.e., a mouse click or other user selection, as by using a keyboard).

The manual selection step required by Toye defeats the purpose of the use of an EMBED tag that is parsed to invoke an executable application, thus teaching away from the hypothetical four-way combination of Mosaic (APA), Berners-Lee, Raggett I and II.

In contrast, the instant '906 claims require the browser (and not the user) to invoke the "executable application" that in turn executes on the client workstation to enable the claimed "interactive processing."

Accordingly, the Toye reference teaching is insufficient to enable one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.

> *b. The fundamental problems solved by the Mosaic, Berners Lee,*
> *Raggett I and II systems (HTML browser) and the Toye system*
> *teach away from a combination that would make the claimed*
> *invention obvious.*

"To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

The Mosaic (APA), Berners-Lee, Raggett I and II combination provides a distributed system where objects may be stored anywhere on the Internet and retrieved using a browser application, e.g., by clicking on a link in a document displayed by the browser to access another document located anywhere on the Internet.

In contrast, Toye teaches a system for collaborative editing of engineering documents within an engineering team that uses a single object-oriented database (DIS) to access and store documents.

The Examiner finds the Patent Owner's argument compelling that "the collaborative editing techniques of Toye would be contrary to the publish-and-view philosophy of the Internet." Furthermore, the Examiner concurs that "the centralized storage technique of Toye works well for highly structured engineering design, but is contrary to the distributed nature of

the Mosaic, Berners-Lee, Raggett I and II combination" [see Patent Owner's response received Oct. 12, 2004, page 23].

The five-way rejection set forth in the last office action (including the Toye reference) fails to provide a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

While Toye does teach dynamic objects (such as audio and video) that may be displayed within the same notebook window using an overlay "virtual window" X-Windows technique, the interactive processing (i.e., editing) taught by Toye <u>can only be invoked manual selection of a data object or file by a user</u> and is therefore not equivalent to the type of interactive processing claimed by the instant '906 patent.

In contrast, the instant '906 claims require the browser (not the user) to invoke the "executable application" that in turn executes on the client workstation to enable the claimed "interactive processing."

> c. It is required to consider the references in their entireties, i.e., including those portions that would argue against obviousness. <u>Panduit Corp. v. Dennison Manufacturing Company</u>, 227 USPQ 337, 345 (CAFC 1985).

The "NoteMail" tool combines the functions of an engineering notebook, hypermedia browser and authoring environment, and a file application manager [see Toye, p. 40, col. 1]. The "NoteMail" system is organized in a