

# **EXHIBIT K-1**

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	A	B	C	D	E	F	G
1	Number	Publication Number	Title	Application Date	Priority Date	Examiner - Primary	First or Exemplary Claim
2	1	US5991301	Broadband telecommunications system	9/8/1995	1995-09-08 1994-05-05	Patel, Ajit	1 claim: 1. A method of operating a telecommunications system to provide a call with a virtual connection wherein a user places the call by sending signaling for the call to the telecommunications system and by transmitting user information to the telecommunications system over a particular connection for the call, wherein the system comprises an ATM interworking multiplexer and a signaling processor linked to the ATM interworking multiplexer, the method comprising: receiving the signaling for the call into the signaling processor; processing the signaling for the call in the signaling processor to select the virtual connection;
3	2	US6181703	System for managing telecommunications	9/8/1995	9/8/1995	Roa; Seema S.	What is claimed is: 1. A method of call processing wherein a user transfers a call set-up signaling message to a telecommunications network that comprises at least one network element connected to a communication path and wherein a signaling processor is linked to the network element and the user, the method comprising: receiving the call set-up signaling message from the user into the signaling processor wherein the call set-up signaling message is not received and processed by the network element connected to the communication path, wherein the signaling processor only
4	3	US5926482	Telecommunications apparatus, system, and method with an enhanced signal transfer point	9/8/1995	1995-09-08 1994-05-05	Jung, Min	What is claimed is: 1. A signal transfer point (STP) operable to apply message transfer part (MTP) functions to a plurality of signaling messages containing point codes wherein the functions are a signaling data link function, a signaling link function, and a signaling network function, the STP comprising: a first means for processing the signaling messages to apply the signaling data link function; a second means for processing the signaling messages to apply the signaling link function;
5	4	US5825780	Method, system and apparatus for telecommunications control	12/7/1995	1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A method for processing telecommunications signaling that comprises: receiving a telecommunications signaling message from a telecommunications user into a signaling processor that is located externally to any network elements that are switches; processing the telecommunications signaling message in the signaling processor to select at least one characteristic for a communications path for the telecommunications user; generating a new telecommunications signaling message in the signaling processor that is based at least in part on the at least one

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1	A Number	B Publication Number	C Title	D Application Date	E Priority Date	F Examiner - Primary	G First or Exemplary Claim
6	5	US6172977	ATM direct access line system	2/2/1996	1996-02-02 1995-09-08 1994-05-05	Cims; Douglas W.	What is claimed is: 1. A method of operating a communications system, the method comprising: receiving superframe traffic into an interworking multiplexer; in the interworking multiplexer, generating and transmitting information messages in response to the superframe traffic; receiving the information messages into a processor; in the processor selecting identifiers for asynchronous traffic in response to the information messages; in the processor, generating and transmitting control messages indicating the identifiers; in the interworking multiplexer, receiving the control messages indicating the identifiers.
7	6	US6081525	Broadband telecommunications system	2/2/1996	1996-02-02 1995-09-08	Hsu; Alpus H.	We claim: 1. A method of operating a telecommunications system to provide a call with a virtual connection wherein a user places the call by transmitting user information to the telecommunications system over a particular connection for the call and by sending signaling for the call to the telecommunications system, wherein the system comprises an ATM interworking multiplexer and a signaling processor coupled to the ATM interworking multiplexer, the method comprising: receiving the signaling for the call into the signaling processor; processing the signaling for the call in the signaling processor to select the virtual connection.
8	7	US6115380	Broadband telecommunications system	11/22/1996	11/22/1996	Rao; Seema S.	We claim: 1. A telecommunications system for providing a service for a call, wherein the telecommunications system comprises: a signaling processor that is operational to receive and process a first telecommunications signaling message for the call and to provide a first control message, a second control message, and a second telecommunications signaling message for the call; a first ATM interworking multiplexer that is linked to the signaling processor and that is operational to receive narrowband traffic for the call.
9	8	US6430195	Broadband telecommunications system interface	11/22/1996	1996-11-22 1995-09-08 1994-05-05	Chin; Wellington	We claim: 1. A telecommunications system that provides an interface between a broadband system and an ISDN system for a telecommunications call, the telecommunications system comprising: a signaling processor that is operational to process SS7 signaling, to select a broadband connection for the call, and to provide a control message that identifies the selected broadband connection and causes an ATM multiplexer to convert the ISDN bearer communications into broadband bearer communications; a signaling converter that is operational to convert ISDN signaling into

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1	A Number	B Publication Number	C Title	D Application Date	E Priority Date	F Examiner - Primary	G First or Exemplary Claim
10	9	US6002689	System and method for interfacing a local communication device	11/22/1996	11/22/1996	Pham; Chi H.	What is claimed is: <input type="checkbox"/> 1. A system for providing an interface for a call between an asynchronous transfer mode network and a local network, the call having user communications and call signaling, the system comprising: <input type="checkbox"/> a first communication device adapted to communicate the call in an asynchronous transfer mode format; <input type="checkbox"/> a second communication device adapted to communicate the call in a time division multiplex format; <input type="checkbox"/> an application adapted to process the call; and <input type="checkbox"/> an interface system comprising: <input type="checkbox"/>
11	10	US5920562	Systems and methods for providing enhanced services for telecommunication call	11/22/1996	11/22/1996	Ton; Dang	What is claimed is: <input type="checkbox"/> 1. A system for providing services for a call from a first communication device in an asynchronous transfer mode format, the call having user communications and call signaling, the system comprising: <input type="checkbox"/> a service platform adapted to receive the user communications and to apply an interactive application to the user communications to process the user communications; <input type="checkbox"/> a signaling processor adapted to receive the call signaling from the first communication device, to process the call signaling to select a first connection to the service platform, and to transport a processor control
12	11	US6031840	Telecommunications system	11/22/1996	1996-11-22 1995-12-07	Olms; Douglas W.	We claim: <input type="checkbox"/> 1. A telecommunications signaling processor that processes Signaling System #7 (SS7) telecommunications signaling messages to select Asynchronous Transfer Mode (ATM) virtual connections and provide control messages indicating the selected ATM virtual connections, the signaling processor comprising: <input type="checkbox"/> a computer system that is operational to store data structures and execute stored logic; <input type="checkbox"/> a call control data structure that is stored in the computer system and that contains information pertinent to individual calls; <input type="checkbox"/>
13	12	US6014378	Telecommunications tandem system for circuit-based traffic	11/22/1996	11/22/1996	Patel; Ajit	It is claimed: <input type="checkbox"/> 1. A telecommunications tandem system for providing a tandem connection for a call, wherein the tandem system comprises: <input type="checkbox"/> a first ATM interworking multiplexer that is operational to receive circuit-based traffic for the call from a first circuit-based connection, to convert the circuit-based traffic into ATM cells that identify a selected virtual connection based on a first control message, and to transmit the ATM cells; <input type="checkbox"/> an ATM cross-connect that is connected to the first ATM interworking

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1	A Number	B Publication Number	C Title	D Application Date	E Priority Date	F Examiner - Primary	G First or Exemplary Claim
14	13	US6704327	System and method for connecting a call	5/9/1997	5/9/1997	Vanderpuye; Ken	What is claimed is: <input type="checkbox"/> 1. A system for connecting a call having user communications and call signaling, the system comprising: <input type="checkbox"/> a signaling processor adapted to receive and process the call signaling to transfer a first control message using a protocol to assure delivery; <input type="checkbox"/> an interworking unit adapted to receive the user communications and the first control message and interwork and transfer the user communications in response to the first control message; <input type="checkbox"/> an asynchronous connection device adapted to receive the first control message from the signaling processor over a first link and transfer the
15	14	US6178170	System and method for transporting a call	5/13/1997	5/13/1997	Ton; Dang	What is claimed is: <input type="checkbox"/> 1. A system for transporting a call having user communications and call signaling, the system comprising: <input type="checkbox"/> a signaling processor adapted to receive the call signaling, to process the call signaling to select a connection, and to transport a control message that identifies the selected connection; and <input type="checkbox"/> an interworking unit adapted to receive the user communications in a communication format, to receive the control message from the signaling processor, to process the user communications according to an identified processing option, to interwork the user communications
16	15	US6081529	ATM transport system	9/18/1997	1997-09-18 1995-11-22	Jung; Min	claim: <input type="checkbox"/> 1. An asynchronous transfer mode (ATM) system for transporting user information in ATM cells that contain a virtual path identification/virtual channel identification (VPI/VCI), wherein the user information is from a continuous-signal transport system that uses a continuous signal to transport the user information and that produces signaling related to the continuous signal, and wherein the continuous signal is associated with the VPI/VCI, the system comprises: <input type="checkbox"/> a processor that is operational to receive the signaling and detect when
17	16	US6192052	Method system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel; Ajit	What is claimed is: <input type="checkbox"/> 1. A communications system for extending a communications path for a call, wherein the system comprises: <input type="checkbox"/> a processor that is operational to receive signaling related to the call, to process the signaling to select a first characteristic for the communications path, to generate a first message that incorporates the first characteristic, and to transmit the first message from the processor; <input type="checkbox"/> an Asynchronous Transfer Mode (ATM) switch that is operational to receive the communications path, to receive the first message, and to

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18	17	US6201812	Method system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A method for operating a signaling system for a communications network wherein the signaling system includes a processing system and a Service Control Point (SCF) and wherein the network is comprised of at least a first network element on a communications path, wherein the method comprises: (a) receiving a first signaling message from outside of the communications network into the signaling system and routing the first signaling message to the processing system, wherein the processing system does not comprise a control processor in a switch; (b) receiving the first signaling message into the processing system
19	18	US6104718	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A method for handling communications, the method comprising: (a) receiving the communications into a first device; (b) receiving information related to the communications into a first processor that is external to the first device; (c) processing the information in the first processor to generate a first message and transmitting the first message from the first processor, wherein the first message is configured to cause the first device to transfer the communications to a second device; (d) processing the information in the first processor to generate a second message and transmitting the second message from the first
20	19	US6108341	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A telecommunications network that comprises: a plurality of devices wherein a plurality of the devices are switches; a processor that communicates with the switches only through telecommunications signaling, wherein the processor is operational to receive telecommunications signaling messages from outside of the telecommunications network, process the telecommunications signaling messages to select characteristics for communications paths for telecommunications network users, and generate and transmit new telecommunications signaling messages that are based at least in part
21	20	US6185219	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A method for processing messages for a call, the method comprising: (a) receiving a set-up message for the call into a processor, wherein the processor is external to devices on a communications path for the call; (b) processing the set-up message in the processor to select at least one characteristic for the communications path for the call; (c) generating a first instruction message in the processor that incorporates the selected characteristic;

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1	A Number	B Publication Number	C Title	D Application Date	E Priority Date	F Examiner - Primary	G First or Exemplary Claim
22	21	US6206660	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel; Ajit	What is claimed is: 1. A method of extending a communications path in a communications system in response to signaling, wherein the communications system is comprised of a processor, an Asynchronous Transfer Mode (ATM) multiplexer, and an ATM switch, wherein the method comprises: (a) receiving the signaling into the processor; (b) processing the signaling in the processor to select a first characteristic and a second characteristic for the communications path; (c) generating a first message and a second message in the processor wherein the first message incorporates the first characteristic and the
23	22	US6212193	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel; Ajit	What is claimed is: 1. A method for extending a communications path from a first network to a second network, wherein the method comprises: in a first device in the first network, selecting a connection for extending the communications path from the first device to a second device in the second network; in the first device, generating a first message that identifies the connection; transmitting the first message to a processor, wherein the processor is external to the first device and the second device;
24	23	US6304572	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel; Ajit	What is claimed is: 1. A method for processing telecommunications signaling that comprises: (a) receiving in-band telecommunications signaling into a first telecommunications device coupled to a first connection; (b) in the first telecommunications device, converting the in-band telecommunications signaling to an out-of-band telecommunications signaling message; (c) routing the out-of-band telecommunications signaling message from the first telecommunications device to a processor that is external to the first telecommunications device and a second communication
25	24	US6366586	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel; Ajit	What is claimed is: 1. A method of operating a processing system to control a packet communication system for a user communication, the method comprising: receiving a signaling message for the user communication from a narrowband communication system into a signaling processing system; processing the signaling message in the signaling processing system to generate a query message; transferring the query message from the signaling processing system

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	Number	Publication Number	Title	Application Date	Priority Date	Examiner - Primary	First or Exemplary Claim
26	25	US6424652	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A method of processing telecommunications signaling for a telecommunication network that includes a first network element, a second network element, and a plurality of connections between the first network element and the second network element, the method comprising: receiving a Signaling System #7 signaling message into a processing system that is external to any telecommunication switches; in the processing system, processing the Signaling System #7 signaling message to select one of the connections between the first network element and the second network element;
27	26	US6463052	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A method of transferring a user communication to a packet communication system, the method comprising: receiving the user communication into a device; receiving signaling formatted for a narrowband system into a processing system; in the processing system, processing the signaling to select a network code that identifies a network element to provide egress for the user communication from the packet communication system; transferring an instruction indicating the network code from the
28	27	US6643282	Method, system and apparatus for telecommunications control	5/20/1998	1998-05-20 1995-12-07 1994-05-05	Patel, Ajit	What is claimed is: 1. A communication network comprising: a packet communication system configured to receive a user communication; a call processor configured to process a signaling message from a narrowband communication system to select a network code that identifies a network element to provide egress from the packet communication system for the user communication; an interface configured to receive the signaling message for the user communication from the narrowband communication system and
29	28	US6249529	Telecommunications apparatus, system, and method with an enhanced signal transfer point	7/16/1998	1998-07-16 1995-09-08	Jung, Min	What is claimed is: 1. A telecommunications system comprising: a plurality of switches that are operable to generate signaling messages that include destination codes that identify destinations for the signaling messages; a signaling processor that resides externally to the switches; a signal transfer point (STP) that is operable to convert the destination codes that identify the destinations into a new destination code that identifies the signaling processor and to route these signaling messages to the signaling processor based on the new destination



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1	Number	Publication Number	Title	Application Date	Priority Date	Examiner - Primary	First or Exemplary Claim
30	29	US6327270	Telecommunications apparatus, system, and method with an enhanced signal transfer point	7/16/1998	1998-07-16 1995-09-08	Jung, Min	What is claimed is: 1. A signal transfer point (STP) comprising: a first means for processing signaling messages containing point codes to apply a message transfer part (MTP) signaling data link function; a second means for processing the signaling messages to apply an MTP signaling link function; a third means for processing the signaling messages to apply an MTP signaling network function wherein the MTP signaling network function includes generating signaling management messages; and We claim: 1. A method of operating an ATM gateway system to handle a call wherein a first ATM system transmits ATM cells and telecommunications signaling for the call to the ATM gateway system, wherein the ATM cells from the first ATM system contain a first Virtual Path Identification/virtual Channel Identification (VPI/VCI), wherein the ATM gateway system is connected to a second ATM system, and wherein the ATM gateway system comprises an ATM gateway and a signaling processor coupled to the ATM gateway, the method comprising: receiving the signaling for the call from the first ATM system into the
31	30	US6026091	ATM gateway system	7/27/1998	1998-07-27 1996-02-02	Patel, Ajit	We claim: 1. A product having software for identifying a communications connection when the software is executed by a computer system, the product comprising: a connection data structure operational to store connection data; an exception data structure operational to store exception data, wherein the connection data structure points to the exception data structure; a caller number data structure operational to store caller number data, wherein the exception data structure points to the caller number data
32	31	US6411624	Telecommunications system	2/2/1999	1999-02-02 1996-11-22 1995-12-07 1994-05-05	Rao, Seema S.	What is claimed is: 1. A method for operating a communication network comprised of a first service platform and a second service platform, wherein the first service platform is comprised of a first processor, a first interworking unit, and a first service node, and wherein the second service platform is comprised of a second processor, a second interworking unit, and a second service node, the method comprising: receiving a first set of information into the first processor wherein the first set of information is related to a first user communication in a first communication format;
33	32	US6349100	System and method for providing enhanced services for a telecommunication call	3/18/1999	1999-03-18 1996-11-22 1995-09-08 1995-12-07 1994-05-05	Olms, Douglas W.	What is claimed is: 1. A method for operating a communication network comprised of a first service platform and a second service platform, wherein the first service platform is comprised of a first processor, a first interworking unit, and a first service node, and wherein the second service platform is comprised of a second processor, a second interworking unit, and a second service node, the method comprising: receiving a first set of information into the first processor wherein the first set of information is related to a first user communication in a first communication format;

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1	A Number	B Publication Number	C Title	D Application Date	E Priority Date	F Examiner - Primary	G First or Exemplary Claim
34	33	US6535483	System and method for providing enhanced services for a telecommunication call	3/18/1999	1999-03-18 1996-11-22	Vincent; David	<p>What is claimed is: □</p> <p>1. A communication system for providing services for a call wherein the call comprises user communications and call signaling, the communication system comprising: □                      a host computer configured to receive a plurality of first processor control messages from a signaling processor and transmit a plurality of host control messages to a media processor wherein one of the first processor control messages is received for each one of the user communications and indicates a service and wherein one of the host control messages is received for each one of the user communications</p>
35	34	US6330224	System and method for providing enhanced services for a telecommunication call	3/18/1999	1999-03-18 1996-11-22	Vincent; David R.	<p>What is claimed is: □</p> <p>1. A method for operating a communication system, the method comprising: □                      receiving information into a processing system wherein the information is related to a user communication in a first communication format; □                      in the processing system, selecting a service and a service node to provide the service based on the information; □                      in the processing system, generating and transmitting a first message from the processing system; □                      in the processing system, generating and transmitting a second message from the processing system to the service node wherein the</p>
36	35	US6272142	Telecommunications tandem system for circuit-based traffic	3/19/1999	1999-03-19 1996-11-22	Patel; Ajit	<p>We claim: □</p> <p>1. A software product for controlling a tandem communications system, the software product comprising: □                      call processing software operational when executed by a processor to direct the processor to receive signaling information associated with an incoming DS0, process the signaling information to select an identifier and a connection for an outgoing DS0, wherein the identifier is for asynchronous communication within the tandem communications system between the incoming DS0 and the outgoing DS0, and transfer control information identifying the incoming DS0, the selected identifier,</p>
37	36	US6795440	Telecommunications tandem system for circuit-based traffic	3/19/1999	1999-03-19 1996-11-22	Patel; Ajit	<p>We claim: □</p> <p>1. A method for operating a tandem communications system, the method comprising: □                      receiving incoming circuit-based traffic into an asynchronous interworking system; □                      receiving signaling information associated with the incoming circuit-based traffic into a processor; □                      processing the signaling information in the processor to select an identifier and a connection and generating control information identifying the selected identifier and the selected connection; □                      transferring the control information from the processor to the</p>