

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Oracle Corporation,
Petitioner

v.

Peter Pedersen,
Patent Owner

Case No. IPR2023-00867
Patent No. 6,965,920

**DECLARATION OF DAVID MARTIN, PH.D., IN SUPPORT OF
PETITION FOR *INTER PARTES*
REVIEW OF U.S. PATENT NO. 6,965,920**

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I. INTRODUCTION

1. My name is Dr. David Martin.
2. I make this declaration in support of Petitioner Oracle Corporation's ("Petitioner") petition for *inter partes* review of U.S. Patent No. 6,965,920 (Exhibit 1001), which I refer to in my declaration as "the '920 Patent." I have been asked to focus on the following claims of the '920 Patent: claims 1-11 and 14-18.
3. I am over 21 years of age and otherwise competent to make this declaration.
4. Although I am being compensated for my time at my normal rate in preparing this declaration, the opinions herein are my own, and I have no stake in the outcome of the *inter partes* review proceeding.
5. I am not an employee of Petitioner or any affiliate or subsidiary thereof.
6. This declaration summarizes the opinions I have formed to date. I reserve the right to modify my opinions, if necessary, based on further review and analysis of information that I receive subsequent to the filing of this report, including in response to positions that parties to the *inter partes* review proceeding, or their experts, may take that I have not yet seen.

7. In this declaration, I have occasionally added typographical emphasis to quotations. This is intended to show the relevance of the emphasized portion to my analysis.

II. MY EXPERIENCE AND QUALIFICATIONS

8. My curriculum vitae is provided in Exhibit 1004, and I incorporate it herein.

9. I have over 40 years of professional experience with computer software. Following informal study in computer science at Iowa State University in the late 70s, I was first hired as a programmer in 1979. I have used computer messaging systems since the late 70s, including the PLATO computer system and its “pnotes” personal messaging and “notesfiles” group messaging facilities. After high school in 1984, I worked for two startups as a software designer and programmer and delivered custom software to Lucasfilm Ltd. under contract. I have worked with the Internet and associated technologies, including Internet email, since the late 1980s. I began using web browsers in 1993. I taught computer science to graduate and undergraduate computer science students for 10 years. I earned a Ph.D. in Computer Science from Boston University in 1999. My Ph.D. research was in the area of Internet security and privacy. I earned a Bachelor of Science degree with distinction in Computer Science and Mathematics from Iowa State University in 1993. I have worked at the University of Denver as

an Assistant Professor, at Boston University as a Research Assistant Professor, and at the University of Massachusetts Lowell as an Assistant Professor. In these positions, I performed research in the areas of computer security and privacy on the Internet. I am currently an independent software consultant.

10. My experience also includes teaching courses in Introduction to Object Oriented Programming (C++); Foundations of (Theoretical) Computer Science; Computer Security I: Principles of Cryptography and Network Security; Computer Security II: Applied Computer Security; Unix Software Tools; Computer Networking; Introduction to Computer Science II (C++); Introduction to Computer Science I (C++); Special Topics in Systems: Computer Security; Advanced Unix Programming; Formal Languages and Automata; Introduction to Computer Science (C).

11. I have received the following honors throughout my academic and professional career: Teaching Excellence Award for U. Mass Lowell Computer Science Department (2007); Teaching Excellence Award for U. Mass Lowell Computer Science Department (2004); One of four nominees for Outstanding Research in Privacy Enhancing Technology Award (2003); Outstanding Teaching Fellow, Department of Computer Science, Boston University (1996); University Graduate Fellowship, Boston University (1993-1994); Top Graduating Senior in Mathematics, Iowa State University, Spring (1993); Top Graduating Senior in

Computer Science, Iowa State University, Spring (1993); Honorable Mention, National Science Foundation Graduate Fellowship (1993); Honorable Mention, Department of Defense Graduate Fellowship (1993); Phi Beta Kappa membership (liberal arts honor society) (1990); Phi Kappa Phi membership (engineering honor society) (1990); Pi Mu Epsilon (mathematics honor society) (1990); Upsilon Pi Epsilon (computer science honor society) (1990); Arthur Collins Foundation Scholarship, Spring (1992); Dio L. Holl Award for Outstanding Senior, Spring (1992); Shell Oil Foundation Scholarship, Spring (1991); Barry Goldwater Scholarship (1989-1990).

12. I have been a member of the following professional societies: the Association for Computing Machinery and the Institute for Electrical and Electronics Engineers.

13. I was first engaged as a software expert over 20 years ago. I have extensive experience analyzing software and descriptions of software. For example, I have analyzed source code from Amazon, Apple, Google, Microsoft, Samsung, Yahoo!, Zillow, and other companies, and have written expert reports and testified about their implementations.

14. I am qualified to render an opinion regarding computer implemented communication systems. Based on my expertise and qualifications, I am qualified

to provide an opinion as to what a person of ordinary skill in the art would have understood, known, or concluded as of 2001 (and earlier).

15. As I explain in more detail in Section VI, the '920 Patent generally concerns software and hardware for the specification and management of how messages are distributed to recipients. I recognize this technology as being well within the sphere of my experience and expertise, and I understand the technology described in the '920 Patent. I believe my experience and education in this industry qualifies me to explain this technology and to address the issues of patent validity from the perspective of a person of ordinary skill in the art. I am qualified to submit expert analyses in this proceeding.

16. I have used my education and experience researching, publishing and working in the field of computer science, and my understanding of the knowledge, creativity, and experience of a person having ordinary skill in the art to which the '920 Patent relates, in forming the opinions expressed in this declaration, as well as any other materials discussed herein.

III. MATERIALS CONSIDERED

17. In forming my opinions, I read and considered the '920 Patent and its prosecution history, the exhibits listed below (which I understand have been

included as part of the petition for *inter partes* review), as well as any other material referenced herein. The exhibits I have considered include:¹

Exhibit No.	Description
1001	U.S. Patent No. 6,965,920 to Pedersen
1002	File History of U.S. Patent No. 6,965,920
1005	U.S. Patent No. 7,058,586 to Law (“Law586”)
1006	U.S. Patent No. 6,690,773 to Law (“Law773”)
1007	U.S. Patent No. 7,072,845 to Law (“Law845”)
1008	Complaint (Dkt. No. 1) filed in <i>Pedersen v. Oracle Corporation</i> , No. 6:22-cv-00410 (W.D. Tex.), with Exhibits A-B thereto
1009	U.S. Patent No. 6,047,310 to Kamakura (“Kamakura”)
1010	U.S. Patent No. 6,711,682 to Capps (“Capps”)
1011	Greenspun, Philip, <i>Database Backed Web Sites: The Thinking Person’s Guide to Web Publishing</i> (1997) (“Greenspun”)
1012	Raggett, Dave, et al., <i>Raggett on HTML 4, Second Edition</i> (1998) (“Raggett”)
1013	Hughes, Lawrence E, <i>Internet E-mail: protocols, standards, and implementation</i> (1998)
1014	U.S. Patent No. 5,765,033 to Miloslavsky
1015	U.S. Patent No. 6,182,118 to Finney
1016	U.S. Patent No. 6,463,462 to Smith (“Smith”)
1017	Alan R. Neibauer, <i>Running Microsoft Outlook 2000</i> (1999)
1018	U.S. Patent No. 5,805,810 to Maxwell
1019	U.S. Patent No. 6,498,835 to Skladman
1020	Webster’s New World Dictionary of Computer Terms, 6th Ed. (1997)
1021	Microsoft Computer Dictionary Fourth Edition (1999)
1022	U.S. Patent No. 6,282,565 to Shaw
1023	Gordon Padwick, <i>Using Microsoft Outlook 2000</i> (1999) (“Padwick”)
1029	Kent Joshi, <i>Special Edition Using Microsoft Exchange Server 5.5</i> (1997) (“Joshi”)

¹ Exhibit 1003 is my declaration and Exhibit 1004 is my CV.

Exhibit No.	Description
1030	Microsoft Corporation, <i>Getting Started—Microsoft Exchange Server Version 5.5</i> (1997). ²
1031	Microsoft Exchange Server, Enterprise Edition, Version 5.5 (1997) (software distribution). ³
1032	D. Crocker, <i>Request for Comments 822: Standard for the Format of ARPA Internet Text Messages</i> (Aug. 1982) (“RFC 822”) ⁴
1033	N. Freed et al., <i>Request for Comments 2045 (“Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies”)</i> (November 1996) (“RFC 2045”) ⁵
1034	N. Freed et al., <i>Request for Comments 2046 (“Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types”)</i> (November 1996) (“RFC 2046”) ⁶
1035	U.S. Patent No. 6,438,584 to Powers
1036	U.S. Patent No. 6,360,221 to Gough
1037	A. Bestavros, M. Crovella, J. Liu, and D. Martin, <i>Distributed Packet Rewriting and its Application to Scalable Server Architectures</i> , Proceedings of the 1998 International Conference on Network Protocols, October 1998

18. For any future testimony I may give in this matter, I may use some or all of the documents and information cited to, referred to, and identified in this

² This manual was included in the packaging for Microsoft Exchange Server, Enterprise Edition, Version 5.5. See Ex. 1031.

³ I purchased this software in May of 2016. See the shipping label on the first page of this exhibit.

⁴ I personally downloaded this exhibit via the datatracker.ietf.org website.

⁵ I personally downloaded this exhibit via the datatracker.ietf.org website.

⁶ I personally downloaded this exhibit via the datatracker.ietf.org website.

declaration, as well as any additional materials that are entered into evidence in this matter.

IV. LEGAL PRINCIPLES OF ANTICIPATION AND OBVIOUSNESS

19. I have been informed and I understand that a patent claim is unpatentable and invalid if the subject matter of the claim as a whole would have been obvious to a person of ordinary skill in the art in the field of the patent as of the time of the invention at issue. I have been informed and understand that the following factors must be evaluated to determine whether the claimed subject matter is obvious: (i) the scope and content of the prior art; (ii) the difference or differences, if any, between each claim of the patent and the prior art; (iii) the level of ordinary skill in the art at the time the patent was filed; and (iv) any objective indicia of non-obviousness.

20. I have been informed and I understand that the objective indicia of non-obviousness (or “secondary considerations”) that should be considered include, for example, the following: (i) commercial success; (ii) long-felt but unresolved needs; (iii) copying of the invention by others in the field; (iv) initial expressions of disbelief by experts in the field; (v) failure of others to solve the problem that the inventor solved; and (vi) unexpected results. I have been informed and understand that evidence of these objective indicia must be

commensurate in scope with the claimed subject matter. I am not aware of any objective indicia of non-obviousness relevant to the claims of the '920 Patent.

21. I have been informed and I understand that independently made, simultaneous inventions, made within a comparatively short space of time, are evidence that the claimed apparatus was the product only of ordinary mechanical or engineering skill.

22. In determining whether the subject matter as a whole would have been obvious at the time that the invention was made to a person having ordinary skill in the art, I have been informed of and understand certain principles regarding the combination of elements of the prior art. A combination of familiar elements according to known methods is likely to be obvious when it yields predictable results. Also, if a person of ordinary skill in the art can implement a predictable variation in a prior art device, and would see the benefit from doing so, such a variation would be obvious. In particular, when there is pressure to solve a problem and there are a finite number of identifiable, predictable solutions, it would be reasonable for a person of ordinary skill to pursue those options that fall within his or her technical grasp. If such a process leads to the claimed invention, then the latter is not a patentable invention, but the result of ordinary skill and common sense.

23. I have also been informed and understand that a teaching, suggestion or motivation is a useful guide in establishing a rationale for combining elements of the prior art. The test poses the question as to whether there is an explicit teaching, suggestion, or motivation in the prior art to combine prior art elements in a way that realizes the claimed invention. Though useful to the obviousness inquiry, I understand that this test should not be treated as a rigid rule. It is not necessary to seek out precise teachings; it is permissible to consider the inferences and creative steps that a person of ordinary skill in the art (who is considered to have an ordinary level of creativity and is not an automaton) would employ.

V. LEVEL OF ORDINARY SKILL IN THE ART

24. I have been informed and understand that the disclosure of patents and prior art references are to be viewed from the perspective of a person having ordinary skill in the art at the time of the alleged invention. I use the shorthand “POSA” (or “POSA”) to describe this person. I have provided my opinions from this perspective. I understand that the relevant time period is around July 2001, the filing date of the application leading to the ’920 Patent.

25. I have been informed and understand that prior art references can provide evidence of the level of ordinary skill in the art, and that factors that may be considered in determining this level of skill can include the educational level of the inventors and active workers in the field, the types of problems encountered in

the art, the prior art solutions to those problems, the rapidity with which innovations are made, and the sophistication of the technology.

26. Based on my education and experience, as described above and in my CV, as well as consistent with the '920 Patent and the prior art described below, it is my opinion that those of ordinary skill in the art during the relevant period would have had at least a B.S. in Computer Science or a related field, and 2 years' experience in web sites or other Internet communications. However, I note that this description is approximate, and a higher level of education or skill might make up for less experience, and additional experience could make up for a lower education level.

VI. SUMMARY OF THE '920 PATENT

27. According to the '920 Patent, its invention relates "generally to the field of messaging and more particularly to a process and method for central specification and management of how messages are distributed to recipients." EX1001 at 1:22-24.

28. The '920 Patent describes, as background known to a POSA in its "Background of the Invention" section that:

The inaccessibility of efficient message management means results in widespread use of inefficient mass communication means, such as spam e-mail, and household delivered promotion materials ("junk mail"). The massive use of Direct Mailings without relevance annoys the receiver by filling up his mailbox and ignoring

his/her real interests. Additionally, the distribution to a potential customer of relevant information-but at the wrong time or in the wrong place may disappoint or frustrate a receiver who missed or was not able to use the information.

EX1001 at 1:58-2:1.

29. The '920 Patent further describes, as background known to a POSA in the same section, that rule based electronic mail systems were known to exist, including the systems disclosed in Miloslavsky and Finney that applied rules based on message content and other control parameters:

Particularly regarding electronic messaging, the field has recognized some of the existing disadvantages and has been motivated to address them. For example, Miloslavsky, U.S. Pat. No. 5,765,033, discloses a rule based electronic mail system for receiving messages, extracting information from the message, and then forwarding the extracted information to a particular recipient based on the content of a set of rules. However, the recipient of the information and the sender of the message do not have direct access to the rule set and the ability to redefine the sets parameters. Finney et al., U.S. Pat. No. 6,182,118, also disclose a rule based system for managing electronic messages. In the Finney system, a recipient can access the rule set and define in advance certain parameters controlling whether a message received by the system is forwarded to the recipient.

EX1001 at 2:7-21.

30. The '920 Patent further described "the Internet" and its various features as having been "well known in the art":

The term “Internet” as used herein refers to a network of networks, which uses certain protocols, such as the TCP/IP protocol, and possibly other protocol such as the hypertext transfer protocol (HTTP) for a hypertext markup language (HTML) documents that make up the World Wide Web. The physical connectivity scheme of the Internet and the communication protocols and procedures of the Internet are well known in the art.

EX1001 at 5:13-20.

31. According to the '920 Patent, prior art rule-based systems suffered from certain shortcomings such that it would be beneficial to add to the system the ability for recipients to access a rules set and maintain a profile to enable each recipient to designate specific messengers or classes and specify how the messages are received:

Therefore, it would be beneficial to have an electronic message management system where each individual recipient could access a rule set and maintain the parameters of his/her own profile, thus enabling each recipient to designate specific or classes of messengers from whom they are willing to receive a message, and to specify how the information or messages are to be delivered.

EX1001 at 2:26-32.

32. However, as I explain in more detail below, including in reference to the prior art (such as Law586 (Exhibits 1005, 1006, and 1007), Smith (Exhibit 1016), Neibauer (Exhibit 1017), Padwick (Exhibit 1023), and Joshi (Exhibit 1029) among other references), there was nothing new or novel about implementing such

particular rules and profiles within a conventional email management system with admittedly well-known computer systems and databases operating over the Internet.

33. Turning to the basic overview of the conventional system architecture, the patent discloses in Figure 1 the basic setup for its invention with conventional computers, interfaces, and databases operating over the Internet:

FIG. 1 is a block diagram exemplifying one embodiment of the present invention in a suitable operating environment. The following description of FIG. 1 provides an overview of computer hardware and other operating components suitable for implementing the present invention, but it is to be appreciated that the present invention is not limited to the configuration shown in FIG. 1. FIG. 1 shows several computer systems 20, 22, 40-43 coupled together through a network 11, such as a LAN, WAN or a global digital communications network, such as the World Wide Web or the Internet.

EX1001 at 5:3-13.

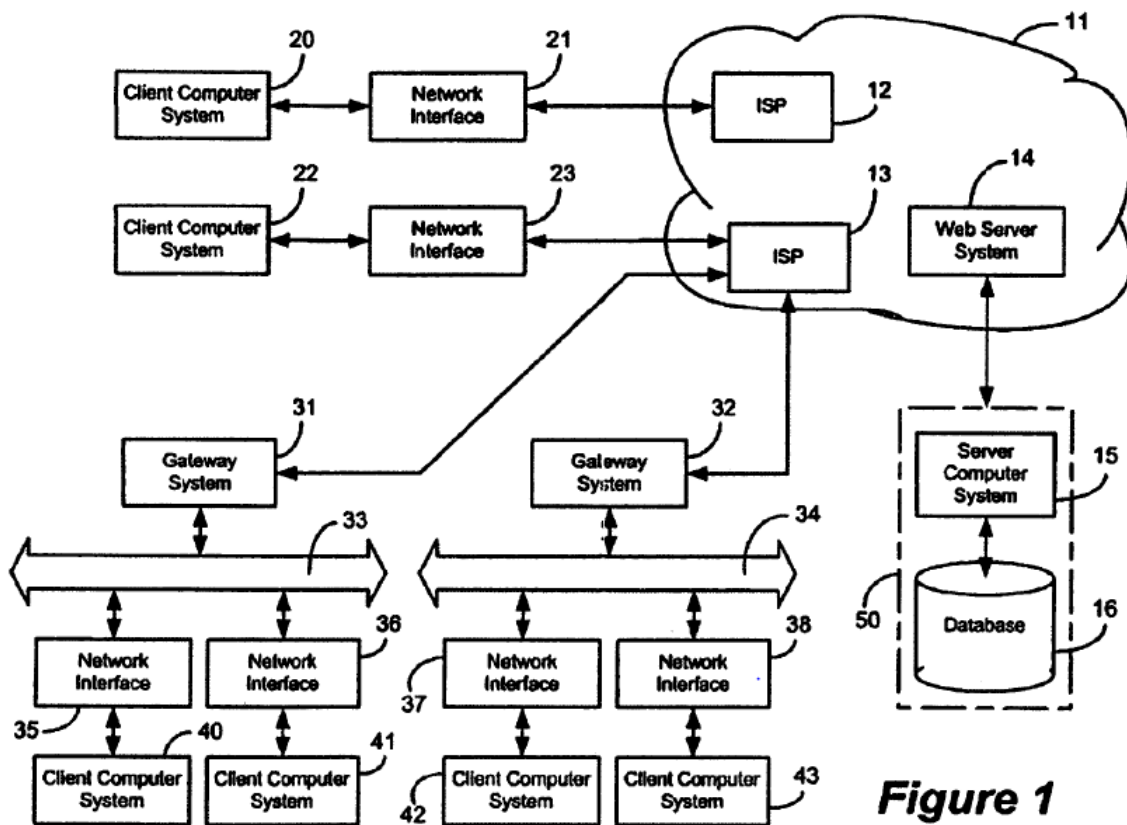


Figure 1

34. Regarding Figure 1 (above), the patent provides further description, again emphasizing the conventionality of the various components and the Internet—all of which were well known to a POSA by the time of the patent (as I explain in more detail in the following sections).

A client computer system 20, 22, and 40-43 typically obtains access to the Internet 11 through an Internet Service Provider (ISP) 12 & 13. Access to the Internet 11 allows a user of a client computer systems 20, 22, and 40-43 to exchange information, receive and send e-mails and view documents such as documents prepared in the HTML format. These documents are provided by web servers 14, which is considered to be “on” the Internet 11. Often these

web servers 14 are provided by ISPs. However, setting up a computer system to be directly connected to the Internet 11, and serve as its own ISP is well-known in the art. A web server 14 is typically at least one computer system, which operates as a server computer system and is configured to operate with the protocols of the World Wide Web, and is coupled with the Internet 11. Optionally, web server 14 can be part of an ISP 12 & 13 which provides access to the Internet 11 for client systems. FIG. 1 shows a web server 14 coupled to a server computer system 15 which itself is coupled to web content 16, which is a form of a media database. It is to be appreciated that while two computer systems 14 and 15 are shown in FIG. 1, web server 14 and server computer system 15 can be one computer system having different software components, one providing web server 14 functionality and another providing server 15 functionality.

EX1001 at 5:21-45.

35. Also regarding Figure 1, the patent further describes the use of known web-browsing software, to access a message management server:

With the appropriate web browsing software, a client computer systems 20, 22 and 40-43 can view HTML pages provided by web server 14 via the Internet 11. In one embodiment of the present invention, the web server 14 comprises a message management server. As shown in FIG. 1, an ISP 12 provides Internet connectivity to a client computer system 20 through a modem or network interface 21, which can be considered part of client computer system 20. Client computer system 20 can be a personal computer system, a personal digital assistant, a network computer, a Web TV system, an Internet radio receiver, or other such computer systems.

EX1001 at 5:46-57.

36. Figure 2 of the patent provides additional detail about the make-up of the message management server 50, including the input forms and databases (all of which were conventional at the time of the patent):

FIG. 2 is a block diagram illustrating the components of an embodiment of the message management server 50 the present invention, and their interrelationships. In the embodiment illustrated, the message management server 50 is at least in [part] comprised of the server computer system 15 and database 16 of FIG. 1. The message management server 50 includes a profile database 56 for centrally storing profile and other information received from messengers and recipients, and from other users, such as system administrators. The message management server 50 includes a message database 57 for centrally storing messages received from messenger client computer systems 40, 41, 42 & 43. A computer system used to enter recipient profile data into the message management server 50 is a recipient computer system 20 & 22.

EX1001 at 6:17-31.

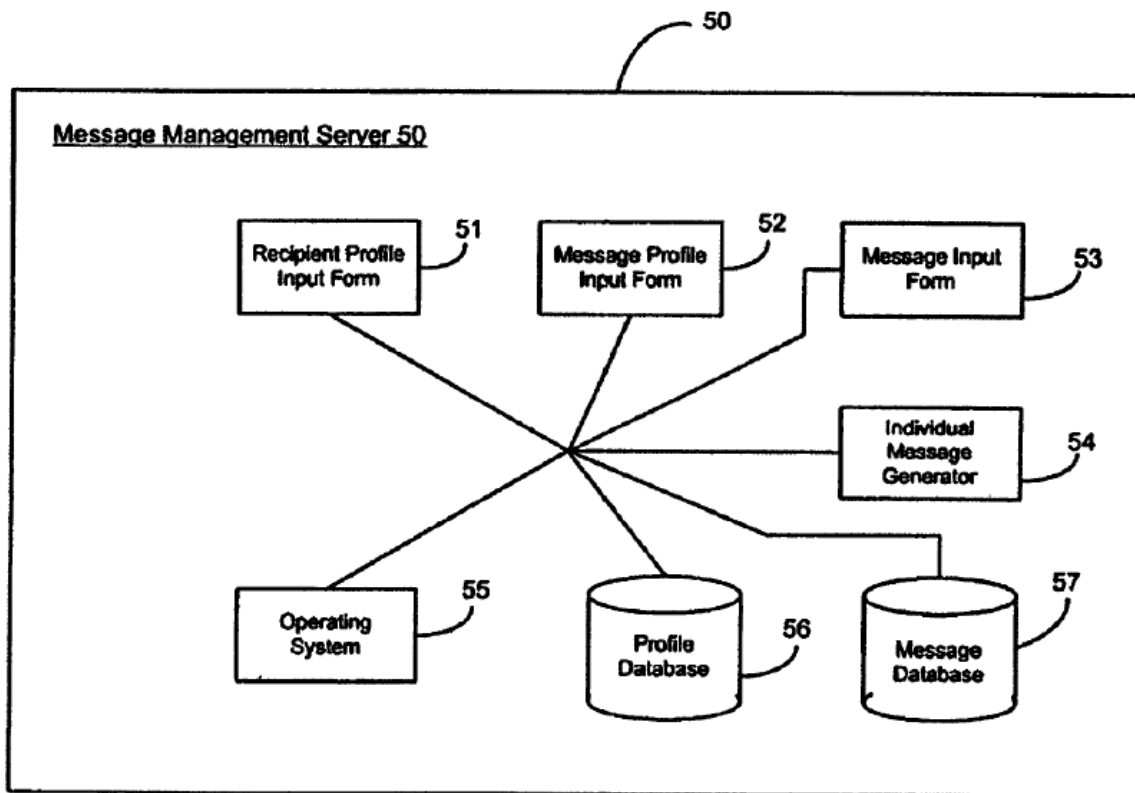


Fig. 2

37. The patent describes the software applications and corresponding input forms, again without any particular detail as such was known at the time of the patent to be conventional (e.g., to be standard to utilize a software application when implementing a webpage to input user information that is then transmitted to a server or database for storage and use by a system). For example, as to the recipient profile:

The message management server 50 comprises a recipient profile software application which includes a recipient profile input form 51. The recipient profile input form 51 include discrete information fields, as will be discussed

below, and may be displayed at a recipient's client computer 20 & 22 as a web page, as described above. The recipient profile input form 51 receives information input through the recipient computer systems 20 & 22, and the associated application processes the information into records to be stored in profile database 56.

EX1001 at 6:32-42.

38. Similarly, for a messenger profile:

The message server 50 also comprises a messenger profile software application, which includes a messenger profile input form 52. The messenger profile input form include discrete information fields, as will be discussed below, and may be displayed at a messenger's client computer 40, 41, 42 & 43 in the form of a web page, as described above. The messenger profile input form 52 receives information input through the messenger computer systems 40–43, and the associated application processes the information into records to be stored in profile database 56.

EX1001 at 6:42-52.

39. For a message input (e.g., to enable a user to input a message):

The message server 50 further comprises a message input software application, which includes a message input form 53. The message input form 53 include discrete information fields, as will be discussed below, and may display at a messenger's client computer 40, 41, 42 & 43 in the form of a web page, as described above. The message input form 52 receives information input through the messenger computer systems 40–43, and the associated software application processes the information into records to be stored in the message database 57.

EX1001 at 6:52-62.

40. Lastly, the patent describes taking the information and, with non-descript software, using it to generate messages:

The individual message generator 54 obtains information from the database 57 and generates an individual messages for each recipient, based on the combination of recipient and messenger profile parameters and messages entered into the profile 56 and message 57 databases.

EX1001 at 6:63-67.

A. THE '920 PATENT'S BROAD USE OF "DATABASE" AND "SPECIFIC TYPES OF MESSAGES"

41. **Database.** The '920 Patent employs a broad understanding of "database." For example, it states "FIG. 1 shows a web server 14 coupled to a server computer system 15 which itself is coupled to web content 16, which is a form of a media database." EX1001 at 5:37-40. The '920 Specification also indicates that databases may contain other databases: "The identification data will be stored in the recipient ID and profile database 121, a sub system of the profile database 56 of FIG. 2." *Id.*, 7:58-60. Similar formulations appear at 7:63-65, 8:3-5, 8:15-17, 8:22-24, 8:26-29, and 8:42-44.

42. No advantage, disadvantage, or consequence of any more specific type of database is discussed or evident in the '920 Patent. For example, the '920 Patent says nothing about "relational", "object-oriented", "flat file", "file system", or any other narrower understanding of "database". *See, e.g.*, EX1011 at 181.

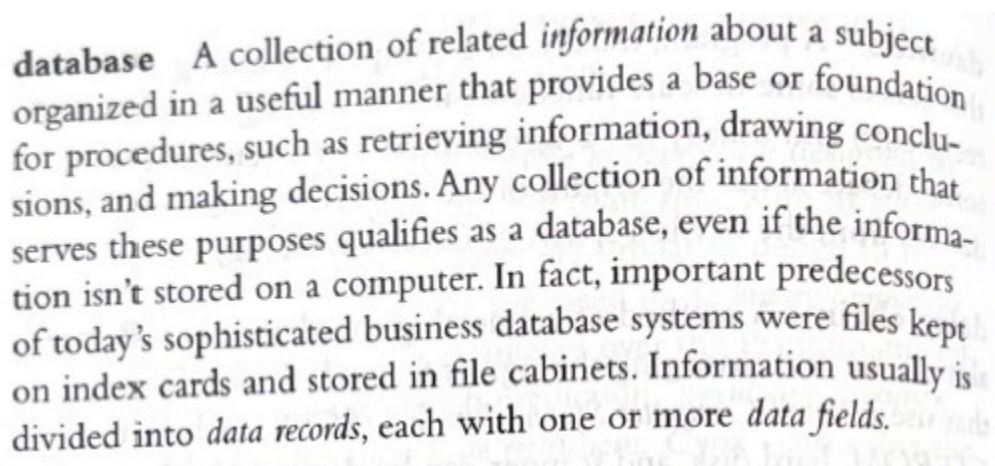
43. I also note that the Patent Examiner repeatedly described Kamakura's "relational database" as satisfying the "database" limitations of the '920 Patent Application. EX1002 at 76-85. This also indicates that "database" is broader than "relational database" and is consistent with the use of the term "database" in the '920 Patent.

44. In addition, the "Database Backed Web Sites" reference explains that, for storage of HTML files that make up web pages, "What you need is a database. You don't need a scary huge relational database management system like I discuss later in the book. If you aren't updating your data in real-time, an ordinary text file is fine." EX1011 at 38. This also indicates that "database" would be understood by a POSA as a broader term than "relational database management system". This usage is also consistent with the use of the term "database" in the '920 Patent.

45. A POSA would additionally understand that a part of a database oriented to storing and accessing a particular kind of data would be referred to using a name identifying that kind of data. *See, e.g.*, EX1035 at Fig. 1 ("Subscriber Database"), Fig. 3C ("sender database"), 13:63-65 ("a separate 'address book' database for each 'sender'"), EX1011 at II ("Phillip Greenspun interfaced our 60GB Oracle medical record database"), 301 ("DejaNews database of Usenet postings"), 346 ("payments in your Quicken database").

46. The Microsoft Outlook/Exchange/OWA architecture also names databases according to function. For example, “The Microsoft Exchange information stores (public and private) are the databases that hold all Microsoft Exchange messaging information. In addition, the information store is the primary storage system for information relevant to users, including messages, server-based mailboxes and their contents, public folders and their contents, private folders that are stored on a server instead of on a user’s computer, documents, forms, and user-defined items.” EX1029 at 316. The Joshi (EX1029) and Padwick (EX1023) references repeatedly refer to distinct “messages”, “mailboxes”, “folders”, “forms” and other entities without making repeated reference to the higher-level “information store” databases that store and provide access to all of these. I discuss the “information store” further beginning in ¶ 69.

47. This is also consistent with dictionary definitions of “database” from technical dictionaries around the time of the ’920 Patent.



database A collection of related *information* about a subject organized in a useful manner that provides a base or foundation for procedures, such as retrieving information, drawing conclusions, and making decisions. Any collection of information that serves these purposes qualifies as a database, even if the information isn't stored on a computer. In fact, important predecessors of today's sophisticated business database systems were files kept on index cards and stored in file cabinets. Information usually is divided into *data records*, each with one or more *data fields*.

EX1020 at 130.

database *n.* A file composed of records, each containing fields together with a set of operations for searching, sorting, recombining, and other functions.

EX1021 at 123.

48. **Specific types of messages.** In my opinion, a POSA would recognize that “type of message” corresponds to the similar term “message type” in the ’920 Patent Specification. The ’920 Patent specification generally uses the “type of message” and “message type” in nearby combination with “content type”. *See, e.g.,* “rules about how to distribute specific types of messages and content” (Abstract), “Receive message type and content type” (Figure 5 at 106), “Additional message types/content?” (Figure 5 at 109), “Receive Specifications on message type content type” (Figure 7 at 305), “Does file specify valid Message type, content type, Rec ID and content?” (Figure 7 at 316), “messengers message profile for the available messages types and content type the messenger will offer and recipient message profiles for recipients who must receive specific message types and content types” (4:41-45), “one or more messengers, type of messages and type of content the recipient wishes to receive” (8:61-63), “specifying the types of messages and types of content the messenger is providing to recipients in general” (8:18-21), “a messenger can specify a list of specific recipient ID’s, each combined with a set of message types and content types that the identified must receive”

(8:24-26), “in step 106, the recipient specifies the message types and content types to be received from the selected messenger” (9:11-13), “Step 107 is repeated until the recipient has specified all necessary delivery profiles and parameters for the chosen message and content type. In Step 109, the recipient editor 150 checks for additional message and content types. Step 106 is repeated until the recipient has specified all necessary message and content types for the chosen messenger” (9:19-25), “FIG. 6 is block flow diagram of an exemplary process related to using the messenger profile input system 200 of FIG. 4 to create and maintain messengers message profiles for the available message types and content type the messenger wishes to offer, and to create and maintain a messenger’s recipient message profile for recipients targeted to receive specific message types and content types” (9:36-42), “the messenger editor 250 displays 206 an input screen from which the messenger can specify multiple Sets of message types and content types to be offered to recipients” (9:57-60), “the messengers editor 250 displays 216 an input screen from which the messenger can specify a list of recipient IDs together with multiple sets of message types and content types that each specified recipient is to receive” (9:64-10:1), “validates 316 that the submitted file is correctly formatted, and has valid message type, content type, recipient IDs, ...” (10:29-31), “If manually entering 305 the message information is elected, the input form 53 prompts the messenger to enter specifications of message type and content type.

The message input editor 350 then looks for match 306 between the messenger, message type, content type and the recipient message profiles...” (10:38-43).

49. Given these disclosures, a POSA would understand that “message type” and “content type” are each used generally to identify whether a given message has a matching characterization when determining the manner in which specific types of messages are delivered to the recipient. As an example, a message might contain a field indicating “high importance” or “contains audio”, and a subsequent process might use this information in determining how to deliver the message. I note that the ’920 Patent specification provides no basis for a POSA to determine what kind of characterization would be rendered as a “message type” as opposed to a “content type”. In addition, the claims do not recite “content type” or any comparable “content” term.

50. Additionally, in my opinion, the ’920 Patent specification’s use of the term “content type” is not a specific reference to the MIME (Multipurpose Internet Mail Extensions) “Content-Type” header that I discuss in Section IX.A.3. The ’920 Patent makes no reference to MIME or any related standards, and as I explained above, the term “content type” is used in the ’920 Patent specification (but none of its claims) simply to describe an identifiable characterization originating from a messenger and subsequently used to determine whether a given message has a matching characterization. While the MIME “Content-Type” header *can* hold such

a characterization, it is only one of countless ways to do so. Furthermore, a POSA would understand that the MIME “Content-Type” header can just as easily provide characterizations of “specific types of *messages*” (as opposed to types of *content*) as that term is used in claim 1 of the ’920 Patent.

VII. PROSECUTION HISTORY

51. I have reviewed the prosecution history of the ’920 Patent (Exhibit 1002).

52. In one rejection, the examiner relied on the Kamakura and Capps patents (Exhibits 1008 and 1009, respectively).

53. In response, the applicant amended certain pending claims and argued that the prior art does not “enable[] the receiver to designate ‘where, when and how’ specific types of messages from a sender/messenger are to be sorted for delivery to the receiver/recipient.” EX1002 at 103.

54. The applicant further asserted that “in a combination of Kamakura and Capps (even if successfully combined) the sender transmits its message to the apparatus; it is the apparatus that designates the receiver of the message.” EX1002 at 104. That was unlike the claimed invention, that “generate[s] an individual message to be sent. . . to the recipient *specified by* a messenger.” EX1002 at 104 (alteration and emphasis in original).

55. After these arguments, the claims were allowed. EX1002 at 120.

VIII. CLAIM CONSTRUCTION

56. I have been informed and understand that the United States Patent and Trademark Office interprets claim terms in an *inter partes* review proceeding under the same claim construction standard that is used in a United States federal court. I understand that under this standard, the meaning of claim terms is considered from the viewpoint of one of ordinary skill in the art at the time of the alleged invention.

57. I have been informed and understand that claim terms are generally given their plain and ordinary meaning as understood by one of ordinary skill in the art in light of the specification and the prosecution history pertaining to the patent. I have been informed and understand, however, that claim terms are generally not limited by the embodiments described in the specification.

58. I have been informed and understand that in addition to the claims, specification, and prosecution history, other evidence may be considered to ascertain the meaning of claim terms, including textbooks, encyclopedias, articles, and dictionaries. I have been informed and understand that this other evidence is often less significant and less reliable than the claims, specification, and prosecution history.

59. In comparing the claims of the '920 Patent to the prior art, I have carefully considered the '920 Patent and its file history based upon my experience

and knowledge in the relevant field (discussed in Section II above and in my CV, attached to my declaration). As relevant to determining the validity of the claims of the '920 Patent in this proceeding, the proper interpretation of the claim terms of the '920 Patent is consistent with the terms' plain and ordinary meaning, as a POSA would understand them, as of the time of the invention of the '920 Patent.

IX. OVERVIEW OF THE STATE OF THE ART

60. All of claims 1-11 and 14-18, and their various limitations, were known in the prior art.

61. As evidenced by the prior art and state of the art discussed in this Section and below in Section X, it was well known and commonplace to a POSA prior to the '920 Patent to provide the claimed features.

62. This is evidenced by the prior art and state of the art, including patent references (such as Law586 and Smith), publications of descriptions of well-known Microsoft products (such as Joshi and Padwick), and other descriptions of the state of the art at the time (such as Greenspun and Raggett).

A. JOSHI AND PADWICK: MICROSOFT EXCHANGE AND OUTLOOK

63. Email messaging systems were in widespread use in the late 90s. *See, e.g.,* EX1005-1007, EX1009, EX1014, EX1032, EX1033, EX1034; EX1013; EX1023; EX1029-1031. At this time, I had personally been using computer messaging systems for more than 20 years. One prominent messaging system that

was known to a POSA in 1999 is Microsoft Exchange (“Exchange”) combined with Microsoft Outlook (“Outlook”) and Outlook Web Access (“OWA”).

Exchange, Outlook and OWA are described in many references, including Kent Joshi, *Special Edition Using Microsoft Exchange Server 5.5* (1997) (EX1029, “Joshi”) and Gordon Padwick, *Using Microsoft Outlook 2000* (May 1999) (EX1023, “Padwick”).

64. While the Joshi reference is focused primarily on the server parts of an Outlook/Exchange/OWA deployment and the Padwick reference is focused primarily on the client parts of an Outlook/Exchange/OWA deployment, the disclosures are overlapping and each describes various aspects of Outlook, Exchange, and OWA. Note that for “Getting More Information about Exchange Server”, Padwick cites to Joshi, writing “Refer to *Special Edition Using Microsoft Exchange Server 5.5*, published by Que, for detailed information about administering Exchange Server.” EX1023 at 663.

65. By way of introduction, Joshi states:

In a small office, [Exchange Server is] a robust messaging and group scheduling system with Internet mail capability, so that Exchange users can reach just about anyone on the internet. In a large corporation, it’s positioned to be the messaging backbone and a versatile groupware product. Using the Forms Designer, you can build custom workflow applications, such as a personnel profiles database.

EX1029 at 2.

Exchange supports several protocols, including SMTP (Simple Mail Transfer Protocol), POP3 (Post Office Protocol), and now IMAP4 (Internet Mail Access Protocol) for email NNTP, (Network News Transfer Protocol) for Internet newsgroups retrieval, LDAPv3 (Lightweight Directory Access Protocol) for Exchange directory access (reads and writes), HTTP and HTML for Web access, and SSL for secure Internet transmission. S/MIME is added for secure encryption of MIME attachments over SMTP mail and MHTML to allow encapsulation of HTML content in MIME format. ETRN support is added to enable the Exchange server to act as both SMTP server and client for easier access to held Internet mail via dial-up.

EX1029 at 3.

66. Exchange deployments can support many thousands of users dispersed throughout the world and have been widely adopted, as explained by Joshi below.

Microsoft's Use of Exchange

Interestingly, when MS Mail was in production, Microsoft internally did not use its own shared-file e-mail system. Instead they used its client interface on top of a proprietary UNIX-flavored system called Xenix mail.

To prove its commitment to the Exchange product, Microsoft has since moved all its internal mail systems to Exchange. At the time of this writing, Microsoft is on Exchange world-wide, with over 100 locations and close to 300 Exchange servers. The bulk of these servers are dedicated messaging servers, followed by nearly as many dedicated public folder servers. They have well over 15,000 public folders in use, with the majority of them used for development-tracking purposes (for build schedules, early adopter-tracking, and so on) but also used for such diverse functions as threaded discussions on almost every topic, and even online sales classifieds.

On the client side, Microsoft has moved to Outlook as the standard client browser to reinforce Microsoft's commitment to their own messaging platform.

Exchange's Momentum

Exchange has picked up considerable momentum since its first release in April 1996.

There have been over 1.25 million Exchange seats deployed to date and around 90 percent of customers use Exchange for Internet Mail connectivity. Forty-five percent (more than one response could be marked) of those use Exchange for pieces of the company intranet. There are over 125 companies actively developing applications and over 15,000 professionals trained on the product.

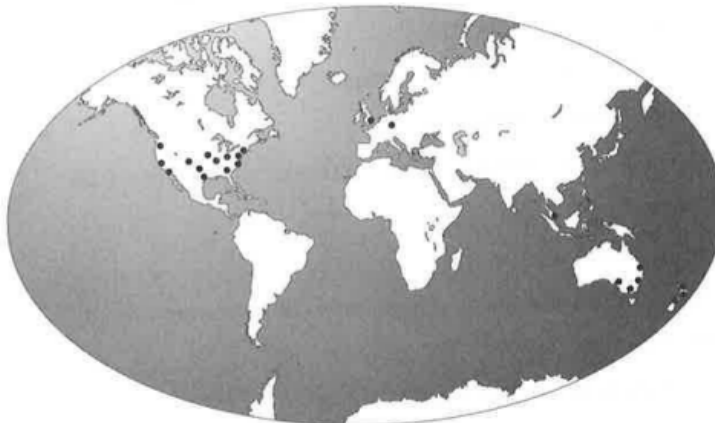
Exchange migrations from MS Mail are a natural evolution and Microsoft spent a lot of marketing effort in 1996 to urge companies to make this move. Much of 1997's efforts have been focused on migrations from cc:Mail, Notes, flavors of UNIX POP/SMTP mail, and legacy HOST systems like PROFS. Software Spectrum has seen work in all of these areas with a particular focus on Notes to Exchange migrations.

EX1029 at 43.

Understanding Exchange Organizations and Sites

The largest administrative unit in Exchange is the organization. All Exchange servers in an association or company are included under the heading of organization. An Exchange organization can be a single-room office with a couple of servers, or a huge, multinational facility with dozens of servers at great geographical distances (see Figure 2.1). Regardless of the situation, often there will be other types of messaging systems with which Exchange must communicate. These systems are not considered part of the Exchange organization, though they may play an integral part in your company's overall messaging scheme.

FIG. 2.1
A Sample Exchange
Organization.



Sites are the second tier of Exchange's hierarchy. They represent a logical grouping of several Exchange Server computers. Servers in a site work together to provide messaging services to a set of users, unified administration and communication services. Within a site, all servers can easily share information and can also be managed as a collection.

EX1029 at 46. *See also* pp. 46-48.

1. Exchange Architecture

67. In a standard usage of Exchange, message senders use Outlook to send messages to recipient. Thus, Outlook acts as a Mail User Agent (MUA) and Exchange acts as a Mail Transfer Agent (MTA). The Outlook user chooses the message recipient(s) by choosing them from a global directory of names known to the deployment. EX1029 at 294-95, 364; EX1023 at 191-194. When the Outlook

user clicks “send”, the Outlook client instructs the Exchange Server to attempt to deliver the message. Joshi describes this as follows:

Message Flow Between Servers

Here are the basic steps a message goes through when the receiver is on a separate server. This process also is detailed in Chapter 2, “Understanding Exchange’s Organization Sites.”

1. Using MAPI calls over an RPC connection, client1 connects to the server and accesses the private Information Store (IS) where all mail messages are held. Client1 sends a new message to Server1.
2. The IS queries the Directory and determines that the recipient (client2) resides on a different server. IS then places the message in the MTA's queue.
3. Server1's MTA sends the message to Server2's MTA.
4. Server2's MTA sends the message to its private IS.
5. The IS sends the recipient (client2) a notice that a new message has arrived; client2 receives the message (see Figure 1.9).

EX1029 at 39-40.

68. The Exchange Server is responsible for applying messaging policy and routing the message towards the designated recipient. This involves selecting appropriate delivery mechanisms for the message corresponding to the recipient names. For example, for a given recipient, Exchange Server may attempt to deliver the message using protocols appropriate for other Mailboxes within the Exchange deployment or by using other email protocols such as those for Internet Mail (SMTP), X.400 systems, cc:Mail, or the older Microsoft Mail protocol. EX1029 at 27. Exchange Server may also apply rules specific to the message. EX1029 at 21 (“For example, you can establish a rule dictating that if Sender = My Manager, to file the message in a folder called Urgent and play a sound.”). Thus, Exchange

Server is an agent of the message sender, acting appropriately for all the messenger's outbound messages. *See also* EX1029 at 19 (“The Message Transfer Agent ... transfers and routes mail messages and attachments between servers.”).

69. Joshi further describes the architecture of Exchange systems, including by identifying the Information Store as “the back-end database that contains all messages and data located on the Microsoft Windows NT server that houses the Exchange server”. EX1029 at 18. Joshi includes further description of the Information Store and MTA:

Introduction to the Information Store

The Information Store (IS) is the end of the line for all messaging data successfully transmitted to an Exchange server. This includes both private messages sent to individual users and public information folders intended for viewing by many users. The IS maintains data in two distinct databases—the Private Information Store and the Public Information Store.

In addition to message storage, the IS handles local delivery of messages (when both sender and recipient are on the same server), replicates public folders, and enforces storage limits. The following is a list of the principal functions of the IS. The MTAs communicate with the following Exchange components:

Component	Communication
Message Transfer Agent	The IS contacts the MTA to accept new incoming mail, to deliver new outgoing mail, and to resolve addresses intended for gateways.

EX1029 at 68.

70. Joshi's Chapter 15 (“Information Store Configuration”) explains that the public and private Information Stores are “the databases that hold all Microsoft Exchange messaging information”:

The Microsoft Exchange information stores (public and private) are the databases that hold all Microsoft Exchange

messaging information. In addition, the information store is the primary storage system for information relevant to users, including messages, server-based mailboxes and their contents, public folders and their contents, private folders that are stored on a server instead of on a user's computer, documents, forms, and user-defined items.

EX1029 at 316.

71. Joshi explains that there are Private, Public, and Directory “Exchange Information Store databases” and points to the “fully relational database structure and SQL-like transaction logging functions of Exchange”:

Exchange Server Information Store

One of the major perceived limitations of Exchange 4.0/5.0 was the 16 GB limit of each of the Exchange Information Store databases (Private, Public, and Directory). Microsoft has shattered the 16GB limit with new JET database technology that raises the limit to 16,000GB (16 terabytes) in each database. By combining this dramatic enhancement with the fully relational database structure and SQL-like transaction logging functions of Exchange, Microsoft opens Exchange to nearly limitless possibilities for managing very complex messaging-based applications.

EX1029 at 6.

72. Joshi also describes that messages sent over the Internet are stored in a database (*e.g.*, in describing how a message is sent between servers, Joshi discloses that “client1 connects to the server and accesses the private Information Store (IS) where all mail messages are held. Client1 sends a new message to Server1”).

EX1029 at 39. In the case of a message sent within one server, Joshi discloses that “client1 connects to the server and accesses the private Information Store (IS) where all mail messages are held. Client1 sends a new message to the IS.” *Id.* Joshi

further discloses that this “Information Store” is the “backend database that contains all messages and data located on the Microsoft NT server that houses the Exchange server.” EX1029 at 18.

Joshi also describes the Directory Service and MTA:

Directory Service	The MTA uses the directory service to look up a user address. The directory instructs the MTA to submit mail from other sites' directories (to perform directory synchronization).
Message Transfer Agent	The directory service notifies the MTA in order to send mail to and receive mail from other directories (during directory replication). The MTA looks up addresses and configuration information from the Directory Service.

EX1029 at 67-69.

73. Joshi further describes message routing in Exchange:

Fortunately for the end-user, the complex message routes are abstracted into the single inbox metaphor. As a system administrator, however, it is essential for you to understand all the possible instances of message routing in order to be able to create the most efficient routes in your Exchange Organization.

The key elements involved in a routing process are:

- Message Transfer Agent
- Directory Service
- Connectors and Gateways

EX1029 at 52.

For routing of a mail message between two different Exchange Servers in the same Exchange site, the message transfer agent (MTA) is responsible for transferring a mail message when the recipient is not on the same Exchange Server as the sender. The MTA uses the recipient's distinguished name (DN) to determine the location of the server. It then routes the mail message to the other Microsoft Exchange Server's MTA.

EX1029 at 52.

For routing between different Exchange sites or foreign systems:

1. MTA provides the engine for routing and transferring data to other servers. The routing process commences when an Exchange Server's MTA receives a message. The message can be derived from a user's mailbox, a connector, or another MTA.
2. The recipient's address is compared to the local site. If they match, the message is delivered as in the previous list.
3. If the sites do not match, MTA will match the recipient's address space to an available connector or gateway.

For example, if the recipient has an SMTP address, the MTA knows how to route it through an Internet Mail connector.

If more than one such connection is available, then one is selected based on routing costs.

4. The MTA sends the message through the selected gateway.
5. The message is delivered according to the process of the receiving system. If the receiving system is an Exchange site, the message will be routed as noted in the previous list. Every other messaging system will have its own delivery methods.

EX1029 at 53.

74. Joshi provides further detail in its Chapter 1 section on “Understanding Message Flow”. EX1029 at 38-40. Joshi also includes Chapter 14 entitled “Message Transfer Configuration”. *Id.* at 301-313. These Chapters disclose many aspects of message delivery, including mechanisms for retransmitting messages as required. *See, e.g.*, EX1029 at 25-26 (“Link Monitor”,

“Intelligent Rerouting”), 306-307 (“RTS Values...how long you want to wait after an error to restart the transfer”, “Recovery Timeout (Sec)... The amount of time after an error occurs that the MTA waits for a reconnection before deleting checkpointed information and restarting the transfer from the beginning.”, “Connection Retry Values”, “Max Transfer Retries”, “Transfer Timeouts (Sec/K)... Messages of different priorities require different levels of attention”); 309 (“*Queues*. Lists messages awaiting transmission by the local MTA.”).

2. Exchange Recipients including Exchange Mailbox, Fax, Voice Mail, Cc:Mail, Microsoft Mail, MacMail, Internet (SMTP), and X.400

75. Joshi teaches that Exchange supports a “Mailbox” folder “as the traditional inbox that most e-mail packages have.” EX1029 at 20. Joshi also teaches that Exchange messages may be carried using voice, fax, and/or pager using functionalities from firms such as Fenestrae, RightFax, Ikon Office Solutions, and/or Octel. EX1029 at 743-746. For example, regarding Fenestrae’s Faxination product, Joshi teaches:

■ **Fenestrae**—Faxination 3.0 for Exchange is a natively integrated fax solution specially designed for Exchange. It adds the power of sending and receiving faxes from, or within, Exchange, just like e-mail. Due to the true native integration, Faxination provides ease of use, ease of management, cost savings, and reliability. The cost of ownership is extremely low.

Faxination for Exchange offers productivity enhancements and can actively control telecommunications costs by offering automatic “off-peak hour” scheduling and “least-cost routing” options. There is no need to install additional fax client software, provide additional end user training, or change workflow procedures. Faxination for Exchange is designed as a native Windows NT service. Faxination is available in English, German,

French, Spanish, Italian, Norwegian, Swedish, Finnish, and Danish. To suit your future needs, Faxination is fully scaleable and can also integrate Mobile messaging and Telex within Exchange. Within Exchange, Faxination is a Fax connector similar to X.400 and SMTP. Fax-specific items, implemented as extensions on Exchange, can be administered through the Exchange administration. Faxination fully supports Exchange 5.0. Faxination for Exchange runs as a service on the Windows NT Server or Workstation. Faxination supports most internationally approved ISDN and analog faxboards. Faxination connects to the Exchange Server as an Exchange transport. It can run on the same physical Exchange Server or a separate machine. Because Faxination has native integration with the Exchange Server, all existing and future Exchange clients are fully supported. In addition this close integration with Exchange enables you to administer Faxination without using a separate administrator program.

Visit this site for more information:
<http://www.fenestrae.com>

EX1029 at 743-744.

76. As quoted in the paragraph above, “Within Exchange, Faxination is a Fax connector similar to X.400 and SMTP ... Faxination connects to the Exchange Server as an Exchange transport ... Because Faxination has native integration with the Exchange Server, all existing and future Exchange clients are fully supported.” A POSA would understand this disclosure to indicate that fax addresses may be configured in a manner similar to X.400 and SMTP addresses. Joshi teaches that such addresses may be assigned to custom recipients route to destinations other than standard Exchange mailboxes, including Cc:Mail, Microsoft Mail, MacMail, Internet (“SMTP users”), and X.400:

Creating Custom Recipients

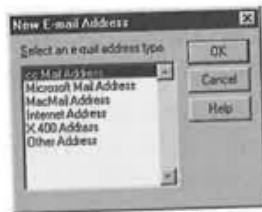
You can define custom recipients for sending messages to users outside the Microsoft Exchange organization global address list. Normally, the recipients are Microsoft Mail users, SMTP users (Internet), or foreign X.400 system users. You can also create custom recipients for any other third-party connector or gateway. After you create recipients, you can replicate across your organization as part of the global address list. The recipients can receive messages from and send messages to a Microsoft Exchange Server. A global icon in the Exchange Administrator program identifies custom recipient objects. Property pages for custom recipients are quite similar to those of standard Exchange mailboxes. The pages for custom recipients do not have as many advanced features as the latter.

The following steps help you to create a new custom recipient:

1. Select New Custom Recipient from the Administrator program File menu. The New Email Address dialog box in Figure 16.13 appears:

FIG. 16.13

Address types for all installed connections and gateways appear in this dialog box.



EX1029 at 364.

77. The above disclosure also indicates that recipients within the system are accessible using standard Exchange facilities: “After you create recipients, you can replicate across your organization as part of the global address list. The recipients can receive messages from and send messages to a Microsoft Exchange Server.” *Id.* See also Padwick Chapter 7, “Sending and Receiving Faxes with Corporate/Workgroup Outlook.” EX1023 at 234-268.

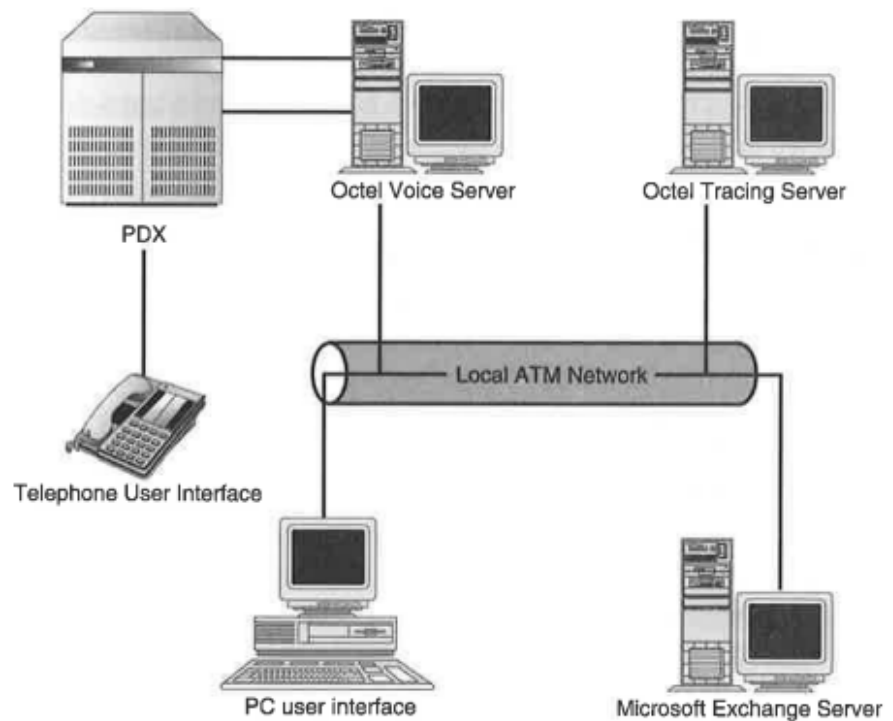
78. Similarly, Joshi describes the Exchange-based voice mail and fax abilities of Octel’s product as follows:

- *Octel*—Octel developed a framework for voice messaging on top of the Exchange platform. The Unified Messaging Strategy consists of using the e-mail backbone for Exchange to connect to PBX phone switches and route voice mail directly to the desk in the Exchange client inbox (see Figure 32.10).

Octel positions the phone systems as an extension to the messaging architecture of an organization. From within the inbox you may receive e-mail, faxes, documents, and now voice mail. Voice mail also can be accessed 24 hours a day by touch-tone phone. Voice mail has many of the same communication properties that e-mail uses. Voice-mail messages are stored and forwarded between users as needed. The messages also are routed by content or request.

FIG. 32.10

Sample office configuration—Octel Voice-Mail gateway for Exchange Server.



The Octel server provides in- and out-bound voice functionality. It acts as a voice-mail gateway to external systems. The user can create a voice-mail message from the desktop and have Octel route the message to the destination to be played back for the user. This Octel system can take advantage of multimedia PCs but doesn't require them. If a user has sound capabilities on the PC, the voice-mail message can be played back from the PC. If the user doesn't have sound capabilities, when he or she opens the e-mail note that contains the Octel message, Octel dials the user's phone number from the PBX and plays the message back over the phone.

The key to this strategy is that Exchange and Windows NT will handle all the directory services for the enterprise. The Exchange account that originates from the Windows NT Domain account also will be used for the voice-mail system. A component of the user account includes the voice-mail system information. However, all the voice-mail data is stored inside the Exchange message in a compressed format. Octel also plans to include faxing as a functionality of this Unified Messaging Strategy.

The Octel server supports voice, fax, text-to-speech, and voice recognition. This includes support for DTMF, DID lines, PBX connectivity, and open computer-industry standards for customization. The server is based on Windows NT and takes full advantage of the user accounts, Windows NT registry, Event Log, performance monitor, and all other Windows NT management utilities. Octel provides additional management capabilities for the Octel server by way of Exchange's Administration utility and a separate administration application.

Visit this site for more information:

<http://www.octel.com>

This section described many of the gateways, connectors, and communication protocols supported by third parties for the Exchange client and server.

EX1029 at 745-746.

79. As quoted in the above paragraph above, "Voice mail has many of the same communication properties that e-mail uses. Voice-mail messages are stored and forwarded between users as needed." *Id.* at 745. In addition, "The Exchange account that originates from the Windows NT Domain account also will be used for the voice-mail system. ... all the voice-mail data is stored inside the Exchange message in a compressed format." *Id.*, 746.

80. Joshi also explains that “the Global Address List is a list of individuals by name (not cryptic e-mail names).” EX1029 at 55. The Padwick reference gives examples of Outlook giving users a choice of the type of address to direct messages to.

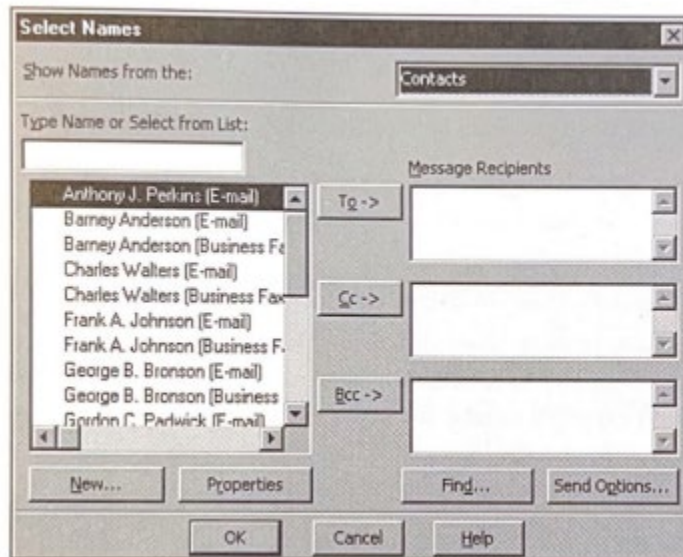
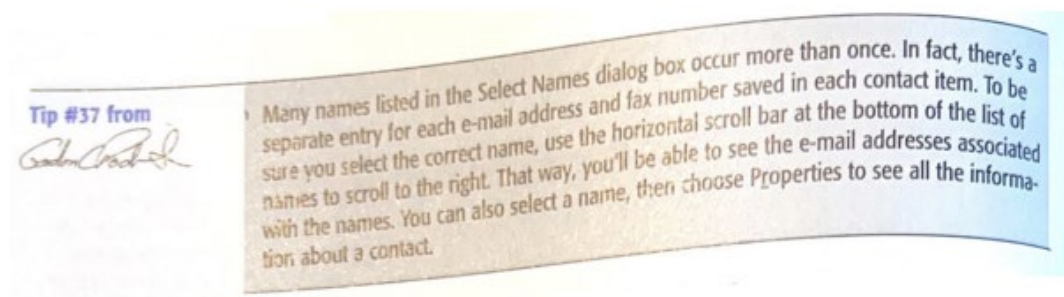


Figure 6.24
In this example, the Contacts address book is available as an Outlook Address Book.



EX1023 at 190-194.

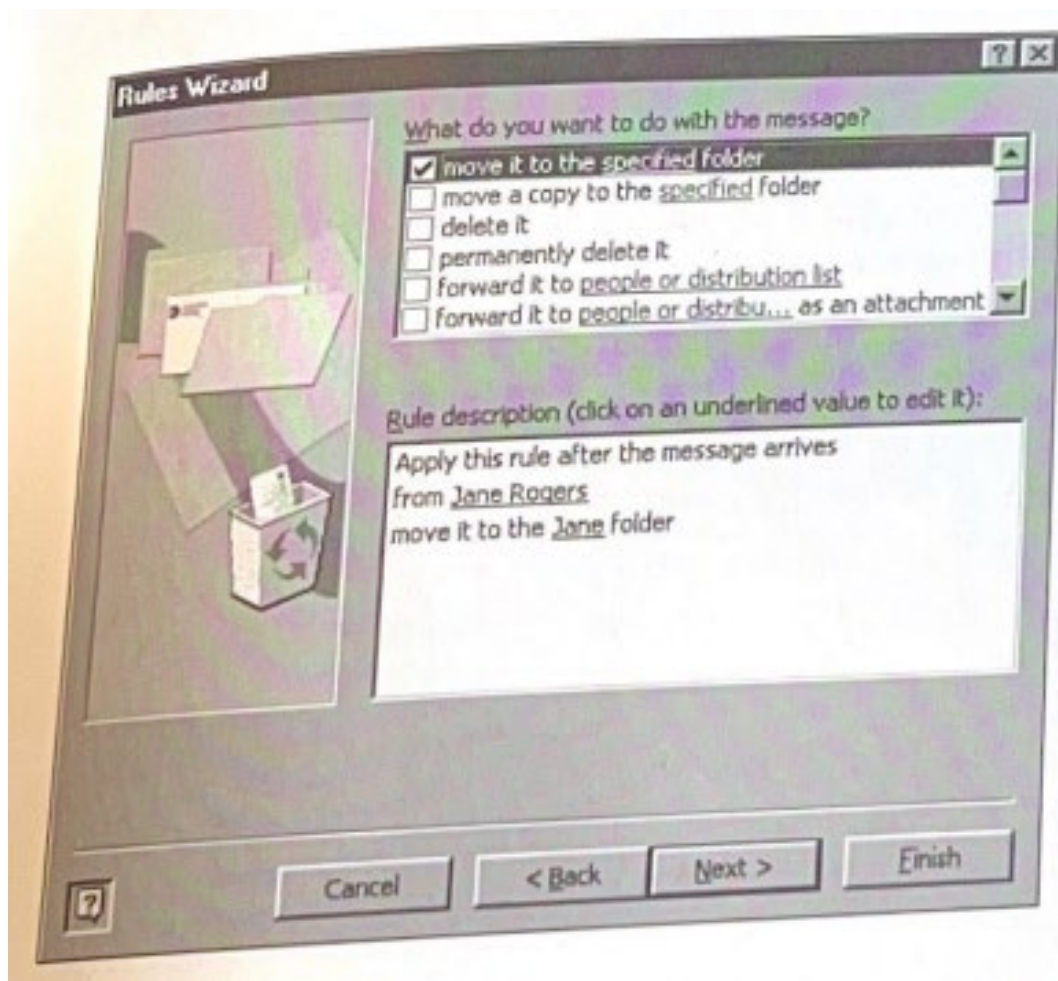
81. Therefore, a POSA would understand these disclosures to indicate that Exchange supports the delivery of messages to Exchange mailboxes as well as to

fax, voice mail, Cc:Mail, Microsoft Mail, MacMail, Internet (SMTP), and X.400 destinations.

3. Exchange Rules

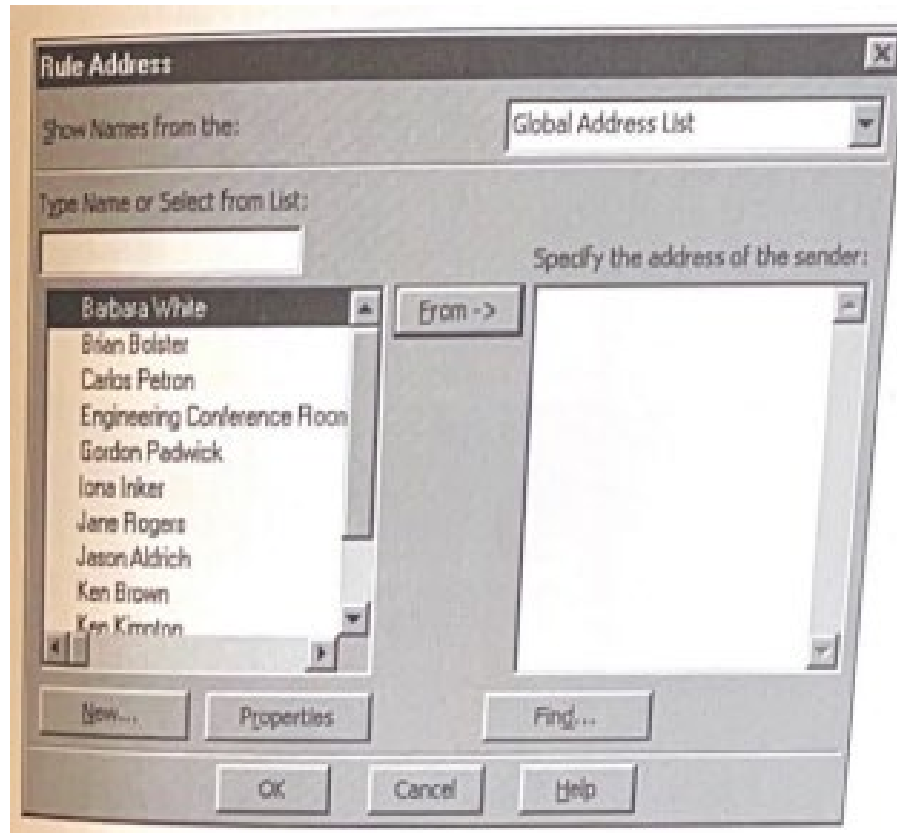
82. Padwick and Joshi both teach Outlook/Exchange/OWA's "rules" feature. Padwick describes how to use Microsoft Outlook 2000 to set up "rules." EX1023 at 618-46. "A rule is a set of conditions, actions, and exceptions that controls how Outlook processes and organizes messages." EX1023 at 618. "The conditions determine which types of messages a rule applies to, the actions are what the rule does; the exceptions determine when a rule does not apply to certain messages." EX1023 at 618.

83. To create and execute rules, Padwick discloses a "Rules Wizard." EX1023 at 618, 624-37.



EX1023 at 629.

84. The “Rules Wizard” display above shows a recipient configuring Exchange to take an action whenever a message from the specific sender Jane Rogers arrives. One of the options offered is to “forward it to people or distribution list”. When the user chooses this option and clicks to configure the “people or distribution lists” to forward towards, a dialog appears allowing the user to select addresses known to the system:



EX1023 at 626-627.

85. The “Rules Wizard [can be used] to create many types of rules for incoming and outgoing messages,” such as “Check Messages When They Arrive,” “Move New Messages From Someone,” “Move Messages Based on Content,” and “Assign Categories Based on Content.” EX1023 at 634. Per Padwick, there are “many combinations of rule types” that a user can create. EX1023 at 635; see also 618:

You can create and edit rules to do things such as:

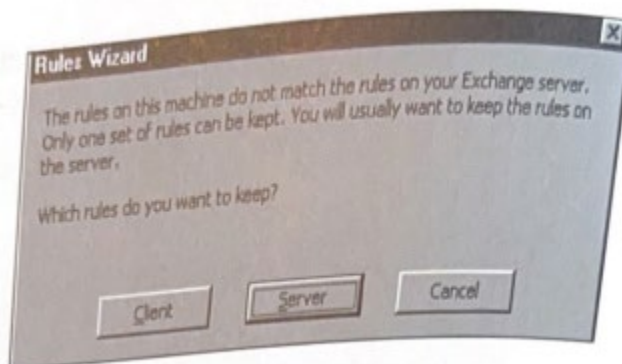
- Perform an action when a message arrives
- Perform an action before a message is sent
- Move incoming messages that satisfy certain conditions into a specific folder
- Notify you when certain messages arrive
- Automatically delete messages that satisfy certain conditions
- Assign a flag to certain messages
- Automatically reply to certain messages
- Notify you when recipients read certain messages

You can combine these and other actions in many ways to create various rules, as described in the rest of this chapter.

86. In Outlook 2000, the rules—such as those used in the Rules Wizard—may be stored and run locally at a client or on a server. EX1023 at 621-22; Fig. 22.4:

Figure 22.4

This dialog box appears only if you're running Outlook as a client for Exchange and only if the new rule could be run either on the client or on the server.



87. Joshi also teaches message forwarding and other message-handling rules and that such rules are implemented on the Exchange server (“[b]ecause the process runs on the Exchange Server, the user doesn’t need to be logged in):

User-Definable Server or Client-based Message Rules

Exchange provides support for *server-based* rules, where users can configure rules to execute on their Exchange home servers, such as forwarding messages to particular individuals, replying with an *out of office* note to all incoming messages, and routing messages to specific folders to manage messaging flow. Because the process runs on the Exchange Server, the user doesn't need to be logged in.

The server rules can apply to applications that are using Exchange. Outside information stores, for example, have a server agent configured from the client. The next time the user logs into the system, the server agent runs to retrieve information for the user.

With several of the flavors of Outlook Client, users have the option of setting up *client-based* rules to assist in managing messages in their local folders. A useful example is to set up a client-based rule to delay sending messages from the Outbox for 15 minutes, which enables you to rethink that message you just sent to the CEO!

EX1029 at 4.

88. Padwick also explains that rules are implemented on the Exchange server by default:

If you create a rule that can be run on the server and doesn't need access to your computer, by default Outlook automatically saves that rule on the server instead of on your computer's hard disk. In that case, the rule's name is displayed in the wizard window without the words "client only" being added.

You know, therefore, that rule names displayed in the wizard window with the words "client only" appended refer to rules that operate only when Outlook is running on your computer; rule names without those words appended run on the server whether or not Outlook is running on your computer.

You can control whether or not Outlook saves rules on the server. To do so, choose Tools, Rules Wizard to open the Rules Wizard dialog box, and then choose Options to display the dialog box shown in Figure 26.28.

By default, Automatically is selected in the Update Exchange Server section of this dialog box. If you want to manually control whether Outlook saves rules on the server, select Manually.

EX1023 at 700.

89. Another view of a user interface for server-side rules is shown below, allowing the rule to depend on who the message is from, who it is sent to, the message subject, the message body, whether it is sent directly to the user, and whether it has been copied (Cc) to the user.

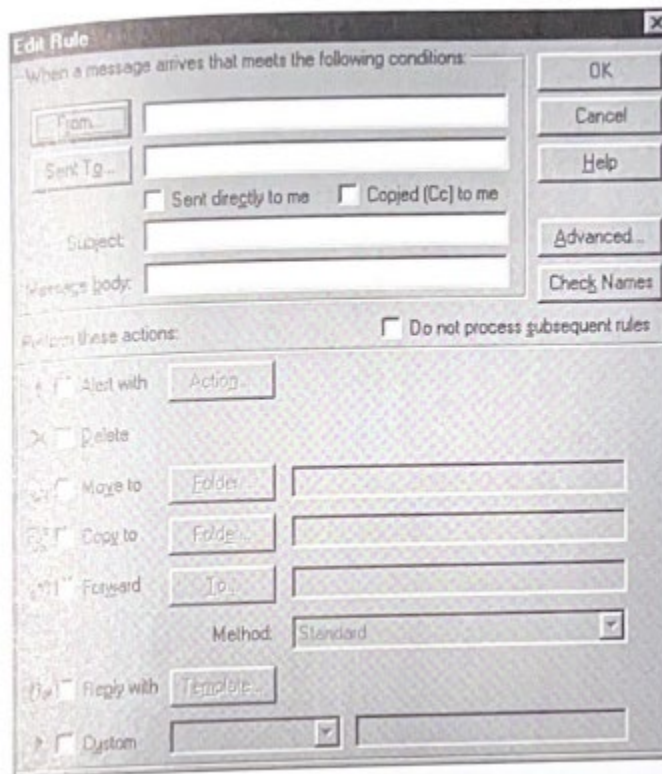


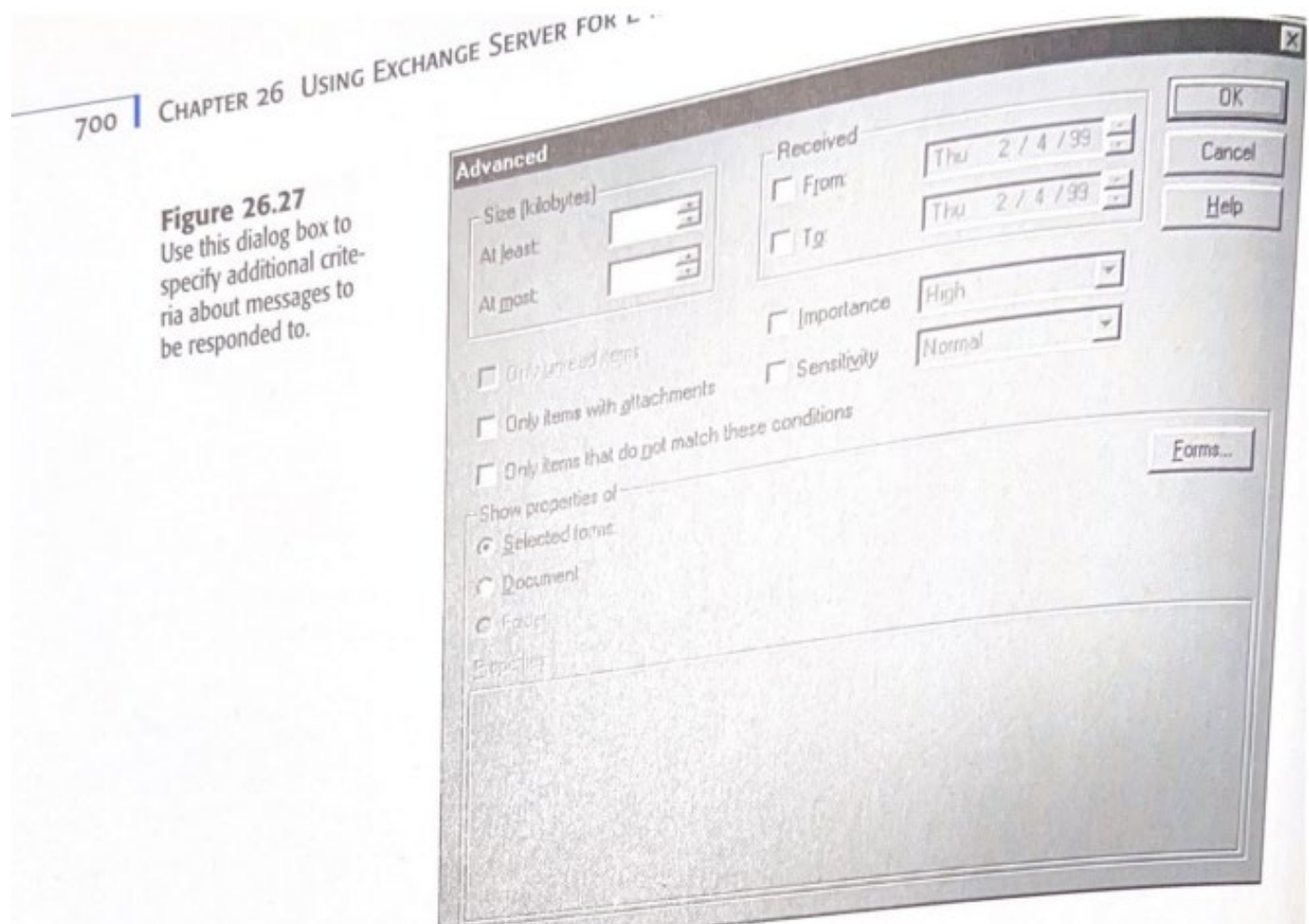
Figure 26.26
Use this dialog box to define a rule that runs on the server when a message arrives in your mailbox in the Exchange store.

EX1023 at 699.

90. Basing a rule on who it is “from” means that users can “create a rule that applies to future messages you receive from a specific sender.” EX1023 at 636.

91. An additional “Advanced” dialog shows that rules may further depend on the message size, the date range when the message was received, whether the

message has certain importance or sensitivity labels, whether the message has attachments, and further options.



EX1023 at 700.

92. Padwick also teaches that some rules are “conditional rules” that execute under certain conditions, for example when a message includes a certain subject matter, content, sender, or importance, or for filtering for certain items such as junk mail. EX1023 at 640-646.

93. Rules may also depend on contents of the “message header”. EX1023 at 630. A POSA would understand these “message header” controls to refer to message fields normally carried in Internet and other email messages that indicate specific characteristics of the email message, such as who the message is “From”, who it is “To”, its “Subject”, its character set, whether it is “multipart” (*i.e.*, has attachments), and related information. *See, e.g.*, EX1032 at 21, 23-24, 5-6; EX1033 at 1, 6-8, 12, 14; EX1034 at 17-28.

94. One common “message header” is called the MIME (Multipurpose Internet Mail Extensions) “Content-Type”, which is used “to describe the data contained in the body fully enough that the receiving user agent can pick an appropriate agent or mechanism to present the data to the user, or otherwise deal with the data in an appropriate manner.” EX1033 at 10. For example, a “Content-Type” specifying “audio” would indicate that an audio capability is required to convey that message to a user. EX1033 at 12.

95. Padwick also includes additional screenshots indicating that rules may be configured to trigger on the basis of specific senders (EX1023 at 626-627), message parameters such as importance (EX1023 at 630-632), message content (EX1023 at 626, 630-631), whether the message names the recipient (EX1023 at 627-629), and other criteria.

96. Given these extensive disclosures about Exchange rules, along with support for the multiple types of message recipients described in Section IX.A.2 above, a POSA would understand that an Outlook/Exchange/OWA deployment allows a recipient to specify rules that detect messages from a particular message sender within a particular date range and forward matching messages to destinations including Exchange mailboxes, Internet (SMTP) destinations, fax machines, voice mail systems, among others.

97. For example, as a recipient, I could create a rule under my own “David Martin” identity indicating that messages e-mailed to me between June 10-18 from Acme Auto Rental should be delivered via fax to the telephone number (515) 292 1212.

98. Exchange also supports rules that apply when forms are submitted to a folder. I discuss these “folder rules” in Section IX.A.4 (Exchange Forms) below.

4. Exchange Forms

99. Joshi describes Exchange’s support for “Exchange Forms”, which are custom interactive forms that can be presented to and filled out by users of an Exchange system. EX1029 at 11, 22-23, 753-810. A POSA would have been familiar with such interactive forms. For example, Joshi teaches that “The Forms designer enables the administrator (or any other user, if granted permission) to create custom forms that can replace paper forms. Most companies have standard

forms for consultants to describe their backgrounds for use in proposals. Why not create this form online, store it in a public folder, and allow the consultant to fill it out on screen and send it to you for processing?” *Id.*, 22. Such forms can also be rendered in HTML for use on the Web, e.g., by Outlook Web Access: “Coupled with Microsoft’s Visual InterDev tool, a developer can more easily convert Outlook forms into HTML forms vi the new Forms Conversion Wizard. After you convert the forms, you can makes them available to Outlook Web Access clients via Active Server Pages.” *Id.*, 8.

100. Rules can also be run when a form item “is submitted to a folder”:

Rules

Just as views are folder properties that apply to form, so are rules. Rules are a powerful feature in Exchange that enable you to control what happens to an item once it is submitted to a folder.

Many e-mail packages have this functionality in some form. In most cases, however, you must be logged in to your mail application for the rules to take effect. Also, most e-mail packages lack the ability to do this with bulletin board-type functionality.

With Exchange, an example of applying rules to a form entry would be that any item meeting certain criteria can be moved to a subfolder, e-mailed to someone else as a carbon copy, or even deleted.

This functionality gives you much more control over the organization of your data, and even helps reduce redundant entries. It cuts down on administration because everything is automatic once the rules are established. For more information on rules, see the section titled “Setting Folder Rules” later in this chapter.

EX1029 at 758.

101. Joshi gives an example of such a form submit rule, writing “You’re going to set a rule that will forward all Web site Button requests for ESPNet to

Ruben Perez because he processes all the ESPNet dealings.” EX1029 at 781.

(“Web site Button” is the name Joshi gives to this specific example used to teach Exchange Forms. EX1029 at 762.) Joshi provides screenshots showing such a configuration applying to “Website Buttons” forms that are submitted identifying ESPNet as the “Company”:

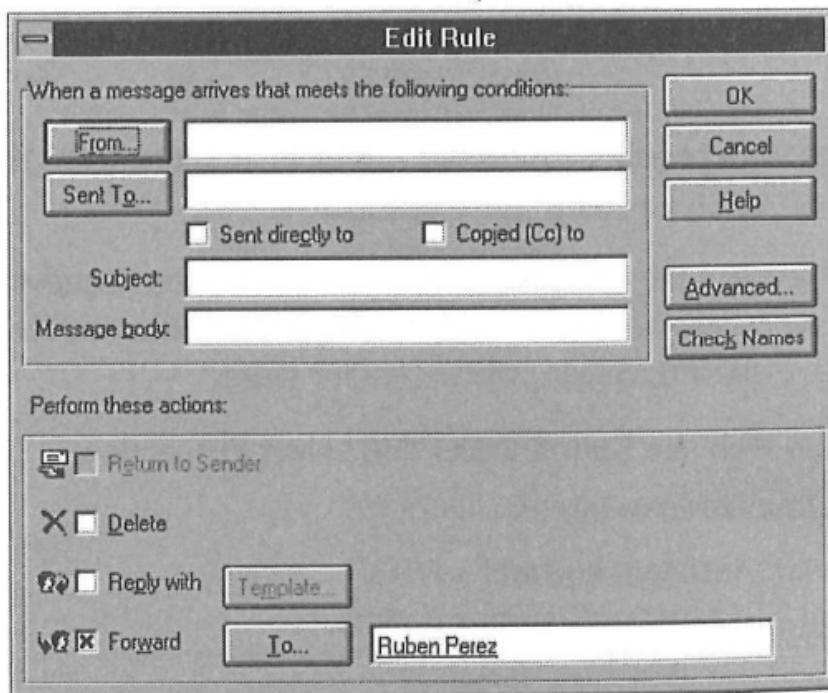
FIG. 33.24

In the Advanced properties, you select fields on the form as search criteria.

The screenshot shows the 'Advanced' properties dialog box. The 'Size (kilobytes)' section has 'At least' and 'At most' fields. The 'Received' section has 'From' and 'To' date pickers set to 'Wed 1 /10/96'. There are checkboxes for 'Only unread items', 'Only items with attachments', and 'Only items that do not match these conditions'. The 'Importance' is set to 'High' and 'Sensitivity' is 'Normal'. The 'Show properties of' section has three radio buttons: 'Selected forms', 'Document', and 'Folder: Website Buttons' (which is selected). The 'Properties:' section has checkboxes for 'Address', 'Company' (checked), 'Contact', 'Ending', and 'Our URL'. The 'Company' field is populated with 'ESPNet'. There are 'OK', 'Cancel', and 'Help' buttons on the right, and a 'Forms...' button next to the 'Selected forms' radio button.

FIG. 33.25

You've now set up a complete rule. All ESPNet requests will be forwarded to the user you chose.



EX1029 at 782.

102. A POSA would understand that such incoming completed forms are stored in Exchange (e.g., in an Information Store) and that this allows rules to be applied to them. For example, in Fig. 33.24 above, the ability to detect specific characteristics of the incoming form such as when it is received and which “Website Buttons” properties it has indicates that these incoming items are stored. Fig. 33.25 also shows that the rule may depend on the specific sender using the “From” box.

103. Padwick describes Exchange forms similarly (using the name “Custom Forms”), from the perspective of an Outlook user: “Outlooks’ standard forms comprise a complete *Personal Information Manager (PIM)* (page 14) that

includes all the functionality needed for many users. But Outlook is also a development environment that gives you the tools you need to create your own custom forms, based on the standard forms. This flexibility means that you are not tied down to the form design or data fields that Microsoft built into the Outlook standard forms.” EX1023 at 1032. As one of several examples, Padwick walks through the creation of a custom form that is a variant of the standard Contact form, with additional fields that a user can fill out. *Id.*, 1047-1054. One step in the form design process is shown below, where the designer has added the fields “Spouse” and “Children” to the lower-right hand corner of the Contact form variant:

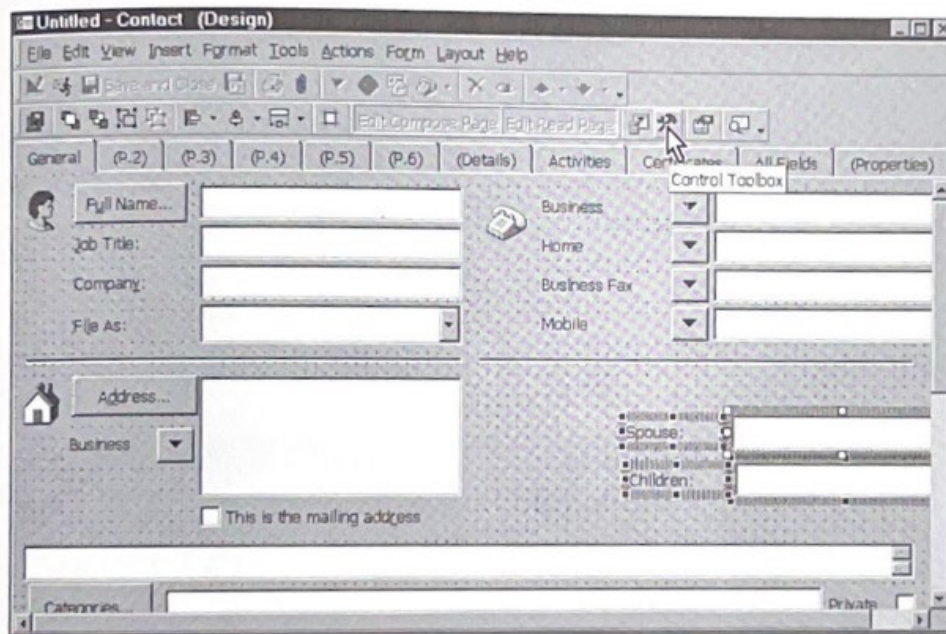
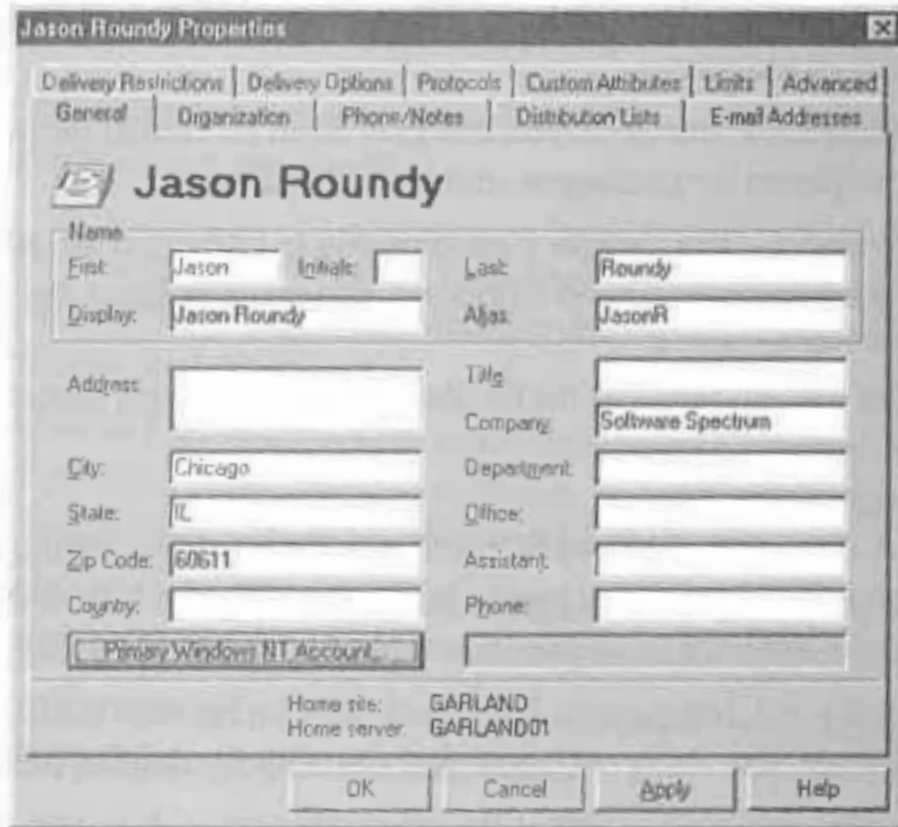


Figure 40.21
Opening the Control
Toolbox.

Id., 1049.

104. Padwick also teaches that “If your computer is attached to a network running Exchange Server, you can share a custom form by saving it to the Organizational Forms Library instead of the Personal Forms Library. The Organizational Forms Library is available to all users on the network, so they can all use your form to make new items.” EX1023 at 1091. Padwick further explains that forms are available via Outlook Web Access: “If your Exchange Server administrator has set up and enabled Outlook Web Access on Exchange, you can create and access forms in HTML format from within Outlook.” EX1023 at 701.

105. The Joshi reference also includes many examples of “properties pages” and “property sheet pages” that present built-in interactive forms in which a user fills out information and may edit it variously before submitting the information, e.g., by clicking on an “OK” or similar confirmation button. *See, e.g.*, EX1029 at 847 (index page), 353 (“Configuring Mailbox Property Pages”), and just one of many screenshots:



Id., 354.

106. Since such Property Pages interactive forms were extremely common at the time of the '920 Patent, a POSA would have been familiar with their abilities and behavior.

5. Exchange and Outlook Web Access

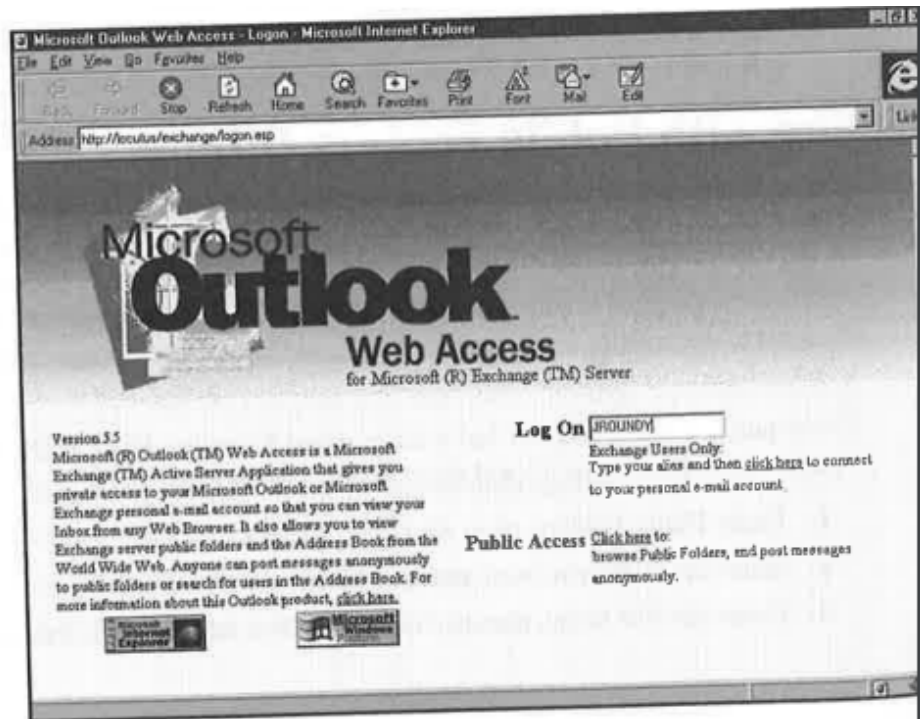
107. In addition to supporting the use of Outlook clients, Joshi teaches that Exchange provides the ability to send and receive mail via an ordinary Web browser using its Outlook Web Access (OWA) functionality:

Outlook Web Access is an enhanced feature of Exchange Server 5.5. This feature is greatly improved from the Active Server component of 5.0 for users needing to attach to the server without having to use the full-featured Outlook client. Outlook Web Access is very practical for someone who wants to use a computer with Internet access to quickly and efficiently check email. Your organization can also utilize Outlook Web Access on computers that cannot run the Outlook client and need an alternative to attaching to the Exchange Server for secure access to mailboxes and public folders, such as UNIX or Macintosh clients.

EX1029 at 716.

FIG. 31.9

User login to mailbox in Web Outlook view.



Id.

108. Joshi teaches that Exchange also provides the ability to “set up ‘rules’” by “using a standard browser” with its OWA functionality:

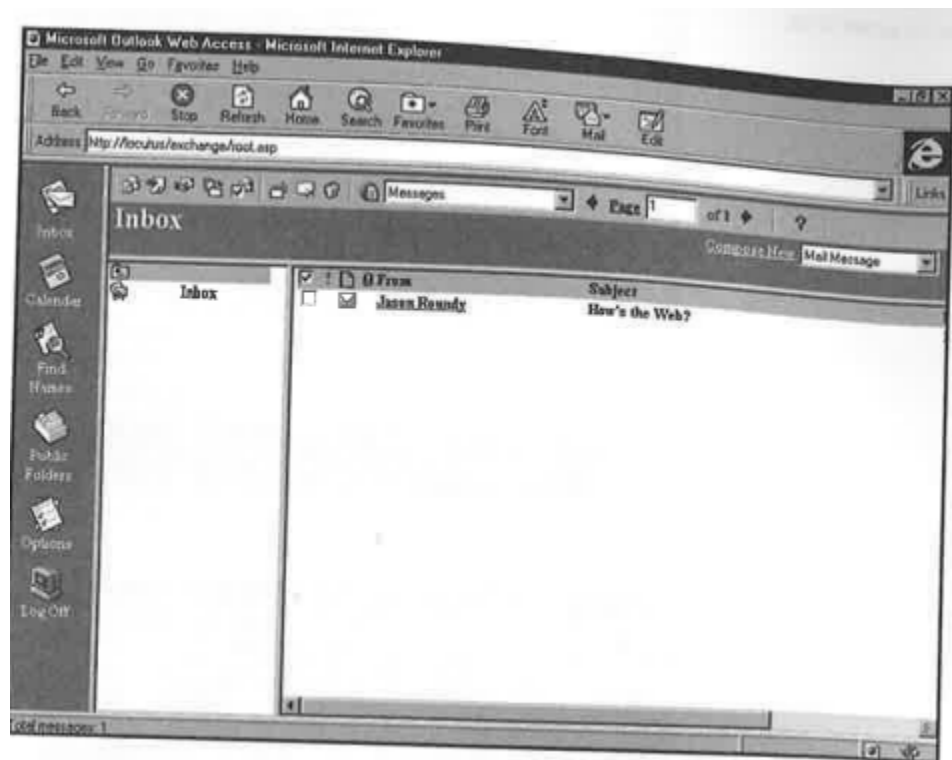
Using Active Server Components (HTTP)

Coupled with Internet Information Server, Active Server components give developers the building blocks to enrich web sites with Exchange functionality, such as messaging, threaded discussion, and directory services. For example, Microsoft completed an Active Server application called Outlook Web Access (OWA). Web Access gives a user the ability to retrieve e-mail, access his server-based calendar, set up “rules,” and of course access Exchange server-based public folders by using a standard browser running on any of a wide range of platforms, including Macintosh, OS/2, or UNIX. Web View gives users more freedom to check e-mail wherever they are. With the advent of “Internet Cafés” and Internet kiosks, users can check their e-mail from anywhere in the world by simply logging onto their companies’ Web sites. Please see Figure 1.6 for a basic flow of HTTP.

EX1029 at 36.

109. An example view of a user’s mailbox using OWA is shown below.

This screenshot shows the Microsoft Internet Explorer *Web browser* accessing the user’s mailbox—not the Outlook client program.



EX1029 at 717.

110. Joshi discloses creating and sending messages using OWA:

Creating Messages In the Inbox of Outlook Web Access, click Send New Message. A New Message form appears, which is similar to the Mail form in Outlook (see Figure 31.11). You have several options to configure before sending the message:

- **To:** This box contains a list of the main recipients of your message.
- **Cc:** Enter the recipients that need a carbon copy of the message.

NOTE When you enter a name in either of the above boxes, you can type in the Display Name of the recipient in your Exchange organization or the SMTP/Internet address for all other recipients.

- **Subject:** You can add a brief description of your message here.
- **Message:** Type in your full text message here.
- **Attachments:** These are files you want to send with your message (see Figure 31.12).

On the Attachments page, type a path to the files you want to attach to your message. On the Options page, configure read and delivery receipts and the use of BCCs (see Figure 31.13).

EX1029 at 717.

111. As shown below, Joshi discloses that senders using OWA create messages using “a New Message form.” EX1029 at 718. The New Message form includes fields for a sender to select recipients, draft a message, and select attachments, such as shown below. EX1029 at 718, Fig. 31.11, Fig. 31.12.

FIG. 31.11
New Message form.

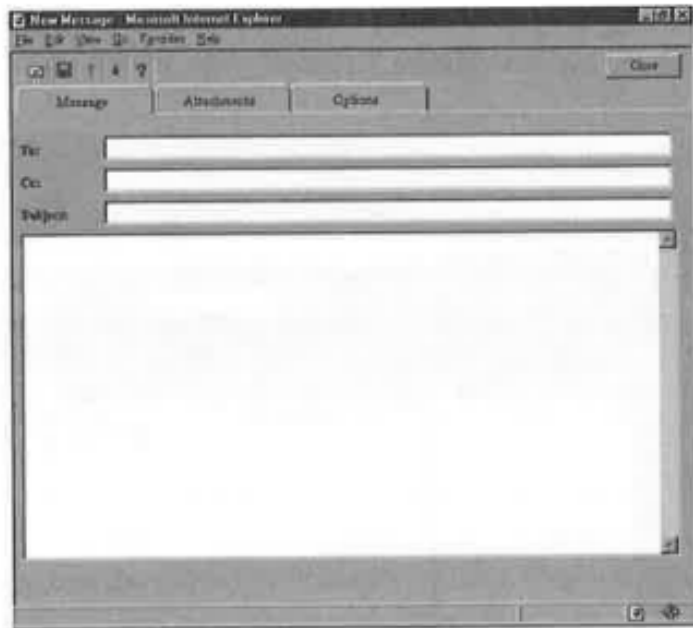
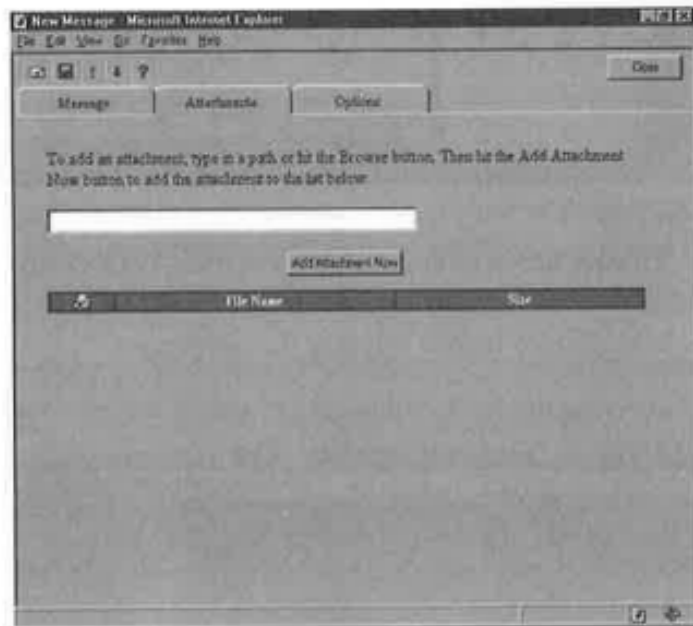
A screenshot of a web browser window titled "New Message - Microsoft Internet Explorer". The browser's address bar shows "http://www.oracle.com". The page has a menu bar with "File", "Edit", "View", "Go", "Favorites", and "Help". Below the menu bar are three tabs: "Message", "Attachments", and "Options". The "Message" tab is active. It contains three input fields labeled "To:", "Cc:", and "Subject:". Below these fields is a large, empty text area for the message body. A "Close" button is located in the top right corner of the form.

FIG. 31.12
Setting attachments in
your message.

A screenshot of the same "New Message" form, but with the "Attachments" tab selected. The "Message" tab is still visible. The "Attachments" tab contains a text area with the instruction: "To add an attachment, type in a path, or hit the Browse button. Then hit the Add Attachment Now button to add the attachment to the list below." Below this text area is a "Browse..." button. Further down is a button labeled "Add Attachment Now". At the bottom of the tab is a table with two columns: "File Name" and "Size". The table is currently empty.

EX1029 at 718.

112. According to Joshi, once a user is “finished filling out the form,” that user could send or cancel the message. EX1029 at 718. Joshi also describes that

messages sent over the Internet are stored in a database. See my explanation in Section IX.A.1 above.

113. Microsoft documentation explains that OWA may be installed on the same computer as Exchange: “Use the Setup program to install Microsoft Exchange Server on your Microsoft Windows NT Server computer.” EX1030 at 5. “Outlook Web Access must be installed on a computer running IIS with Active Server Pages installed. This enables all available user authentication options. If Setup detects IIS during a Typical installation, Outlook Web Access is automatically installed.”⁷ EX1030 at 9.

B. GREENSPUN: PREFERENCES FOR MULTIPLE SENDERS

114. In Chapter 13 of “Database Backed Web Sites: The Thinking Person’s Guide to Web Publishing” (1997), Greenspun describes and provides code for a mailing list server, a bulletin board server, and other case studies. EX 1011 at 253-307. Using Web forms, these systems allow message recipients to specify the manner in which recipients receive messages on a per-messenger basis.

115. For example, in “Case 2: The Mailing List”, Greenspun describes a server that supports multiple independent mailing lists. Greenspun presents a data

⁷ IIS is an abbreviation for Microsoft Internet Information Server: “As a feature of the Internet Mail Service of Exchange when integrated with the Microsoft Internet Information Server (IIS), email functionality is also available by using a standard Web browser.” EX1029 at 2.

model for a mailing list manager system called SPAM, including the following table:⁸

```
create table spam_domains (  
    domain          text not null primary key,  
    backlink        text, -- a URL pointing back to the page  
    backlink_title  text, -- what to say for the link back  
    blather         text, -- arbitrary HTML text  
    challenge       text default 'Your mother''s maiden name',  
    response        text,  
    maintainer_name text,  
    maintainer_email text,  
    notify_of_additions_p boolean default 't',  
    list_type       text -- 'basic', 'snail_too', 'snail_plus_demographics'  
);
```

EX1011 at 261.

116. In this model, the “spam_domains” table lists basic information about each mailing list in the system. The “domain” field would differentiate between the messengers of the independent mail lists. For example, one domain might be “photo.net”, while another might be “Gates Diary”. EX1011 at 261, 264. The mailing list maintainer’s email would be stored in the “maintainer_email” field, who would be “the only one who can send mail to the list”. EX1011 at 254, 170. Therefore, each mailing list corresponds directly to exactly one messenger.

⁸ “Ditto for my SPAM mailing list manager system (<http://www.greenspun.com/spam/>), described *ad nauseum* in Chapter 13.” EX1011 at 351. Note that this system is for *sending* potentially large amounts of email; it has nothing to do with determining whether incoming email is junk or “spam”.

117. The “list_type” field determines whether the mailing list supports email (“basic”), email along with “snail mail” (*i.e.*, physical delivery mail) (“snail_too”), or email with snail mail and awareness of recipient age and sex demographic information (“snail_plus_demographics”).

118. Greenspun next presents the “spam_list” table part of the data model:

```
create table spam_list (  
    domain          text not null references spam_domains, -- which list is this  
entry for  
    email           text not null,  
    name            text,  
    -- info for 'snail_too'  
    line1           text,  
    line2           text,  
    city            text,  
    state           text,  
    postal_code     text, -- ZIP+4 better, but five digits ok. Canada, too!  
    country         char(2),      -- ISO country code  
    -- info for snail_plus_demographics  
    birthday        date,  
    sex             text check(sex in ('M','F')),  
    primary key( domain, email )  
);
```

EX1011 at 262.

119. The “spam_list” table stores recipient profile information on a per-mailing list basis. For example, the field “domain” above would be used to store “which list is this entry for”, as indicated by the comment. In other words, recipient profile information specific to the “photo.net” mailing list would put “photo.net” into the “domain” field. The recipient’s email address and name, in the “photo.net” mailing list, would be stored in the corresponding “email” and “name” fields above. For mailing lists that were configured to also support physical mail delivery (“snail_too”), the recipient’s snail mail address would be stored in the “line1”,

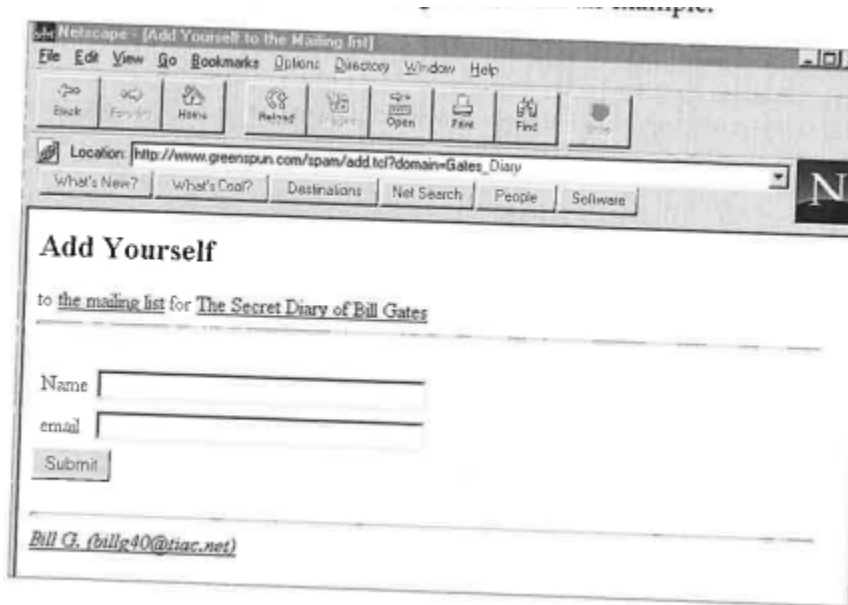
“line2”, “city”, “state”, “postal_code”, and “country” fields. For mailing lists that were configured to support demographic information, the recipient’s birthday and sex would be stored in the like-named fields.

120. A POSA would understand that the “spam_list” table stores recipient profile information corresponding to *where* and *how* messages are to be delivered on a per-mailing list (thus, per-messenger) basis.

121. In this model, a recipient can specify different email, address, and/or demographic identifying information for different mailing lists and therefore for different messengers. For example, if I were subscribed to both the “photo.net” and “Gates Diary” mailing lists, then the system would store two records in the spam_list table: one record with domain=“photo.net” specifying my addresses for that list and messenger, and then a separate record with domain=“Gates Diary” specifying my information for that list and messenger—with no requirement that my information be the same for both lists/messengers.

122. Greenspun details code that presents an interactive form allowing a recipient to control their mailing list-specific profile information on pp. 262-263.

The resulting interactive form, for an email-only (“basic”) mailing list, is illustrated as well:⁹



EX1011 at 264.

123. In a later example of a bulletin board system, Greenspun provides code and explanation for controlling *when* a user receives email of new postings that fit their interests, such as “Instant”, “Daily”, “Monday and Thursday”, or “Weekly:”, and only when the postings match the specified “Keywords”:

⁹ While this screenshot is for a “basic” mailing list, the code presented on pp. 262-263 provides the forms for “snail_too” and “snail_plus_demographics” mailing lists as well.

Add an Alert

for the photo.net Q&A Forum

If you'd like to keep up with this forum but don't want to check the Web page all the time, then this forum will come to you! By filling out this form, you can ask for email notification of new postings that fit your interests.

Step 1: decide how often you'd like to have your mailbox spammed by this server:

☐ Instant (as soon as a posting is made)
or...
☐ Daily ☒ Monday and Thursday ☐ Weekly

Step 2: decide if you want to limit results by keyword

Keywords: (separate by spaces)

[Note: if you type anything here, you will *only* get notified when a posting matches *at least one* of the keywords. Keywords are matched against the subject line, message body, author name, and author email address.]

Final Step: Tell us your Email Address:

Edit Previous Alerts

Not interested in this subject anymore? Going on vacation? You can put your alerts on hold.

Start by entering your email address:

EX1011 at 293.

124. Greenspun explains that this *when*-type information can be stored in its own table to control what messages are prepared for the user:

```

create table bboard_email_alerts (
    email text not null,
    topic text not null references bboard_topics,
    -- we set this to 'f' if we get bounces
    valid_p boolean default 't',
    frequency text,
    keywords text
);

```

Fundamentally this registers EMAIL's interest in TOPIC. Frequency is one of instant, daily, Monday/Thursday, or weekly. If I sign up for a weekly alert for the photo.net topic then I'll get a summary prepared early Monday morning. If I add a string to the KEYWORDS column, I'll get only those new messages that also match in the full-text index (see below). For example, I can restrict any frequency alert to only return messages related to "nikon." Instant alerts are e-mailed individually as new messages are posted.

EX1011 at 290.

125. This data model above allows per-recipient specification of the "frequency" of communications for each separate bulletin board topic.

126. I note that Greenspun's bulletin boards do not share the "single messenger" aspect of his mailing lists, because a bulletin board allows multiple users to post articles. However, a POSA would understand that the feature indicating recipient control over *when* messages are to be received would naturally apply to the single-messenger mailing list case as well, even though Greenspun presents it in the context of a bulletin board system. A recipient's interest in when they wish to receive messages depends on the recipient's schedule and availability and the expected volume of messages and is not limited to only those cases where multiple messengers may be involved.

127. Furthermore, both the single-messenger mailing list systems and bulletin board systems are presented in the very same Chapter 13 of Greenspun. The author explains that “I present user interface, interaction design, and data modeling ideas that should be useful to you in many contexts.” EX1011 at 253. The chapter begins with a relatively simple system (a single mailing list with a single messenger) and progressively adds features and complexity in later case studies in the chapter, including the bulletin board case study #5. Greenspun explains that “Case 5, the bulletin board system extended with user-requested features, pulls together a lot of threads from previous cases: generalizing a service with distributed maintenance; using e-mail to pull a community together around a Web site; sending e-mail alerts by a nightly sweeping function.” EX1011 at 254. Thus, a POSA would immediately understand that features presented in one part of the chapter would be applicable to other systems in the chapter as well.

128. Greenspun also describes and provides code for control of profile information regarding messengers. For example, an administration form for the “photo.net” bulletin board and its maintainer is shown here:

Administration for "photo.net"

a discussion group in [LUSENET](#)

[[user page \(threads\)](#) | [user page \(Q&A\)](#)]

Information about this BBoard

Backlink (a URL; whichever page this discussion group will be associated with)

Backlink Title (the title of the above URL)

Maintainer Name (the full name of the bboard administrator/moderator/owner, presumably this will be you)

Maintainer Email Address (email address of the above person)

Admin Password (administration password)

User Password (user password; if you leave this blank, the b-board will be public; if you set it to something then only users who know the password will be able to use the system)

Subject Line Suffix (legal values are blank, "name", "email")

Notify Maintainer of New Postings? ☒ Yes ☐ No (the administrator will get email each time a post is made)

Default to Q&A format? ☒ Yes ☐ No (any forum can be presented to users either as Q&A or as threads)

EX1011 at 291.

129. The corresponding data model showing how the maintainer information is stored is presented on the preceding pages. EX1011 at 288-290.

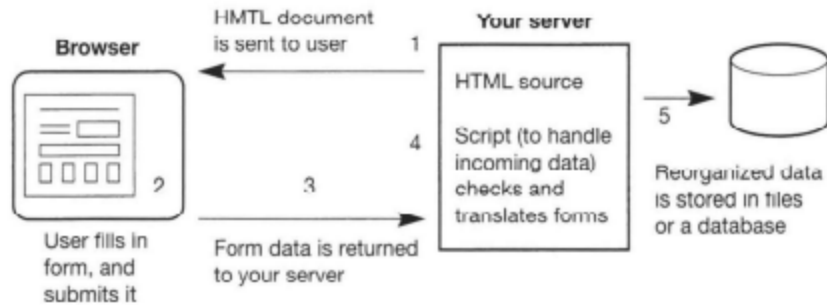
C. ACTIONS TAKEN IN RESPONSE TO MESSAGES RECEIVED FROM PARTICULAR SOURCES

130. Consistent with the sources cited and discussed above, it was well known at the time of the '920 Patent that "rules" (see Section IX.A.3) and similar specific actions could be applied to take actions based on particular senders. EX1019 at 7:29-32 ("[T]he user profiles can define specific actions to be taken by

the servers 64, 66 in response to messages received from particular sources or regarding particular subjects.”). *See also* EX1019 at 10:34-46.

D. OTHER INTERACTIVE FORMS

131. Interactive input forms on the Internet and World Wide Web were well known at the time of the '920 Patent filing. For example, the Raggett reference on the World Wide Web's HTML language includes an entire chapter entitled "Forms". EX1012 at 197-227. Raggett states "A form consists of a group of fields to fill in, and these appear on the screen when a user loads the HTML document in question ... A paper form contains a title, some printed instructions, and various boxes for you to fill in. Sometimes you need to write your name or various numbers in these boxes; sometimes you can just insert a single letter (like 'M' for Married) in a form-field, and sometimes all you need to do is check the box to indicate that you have selected this item. All of these mechanisms are available in HTML forms in the shape of fields, checkboxes, radio buttons, selection menus, and so on." *Id.* at 198. "HTML forms, then, together with server scripts, render your documents truly interactive; your users can talk back." *Id.* at 199. Raggett illustrates the data flow of a user completing a form as follows:



Id. at 199.

132. Raggett shows multiple HTML form specifications together with screenshots of how they would appear to the user who interacts with them. For example:

```

<FORM ACTION="savezip">
  <P>Zip or post code: <INPUT NAME="zipcode" SIZE="9">
  <P> <INPUT TYPE="submit">
</FORM>
  
```

Id. at 201-202.

133. In the above example, the user is given the opportunity to interactively enter a Zip or post code into the blank box using a keyboard and/or pointer device. The value in the box is not transmitted from the client's browser to the Web server until the user selects the "Submit Query" button. Until doing so, the user may interact with the form by entering whatever information they like in the box,

changing their mind and entering something else, switching to another program while looking up the requested information, etc.

134. Of course, interactive forms are not limited to those of HTML and the World Wide Web. For example, I give example of Property Pages interactive forms in Section IX.A.4. In addition, Joshi describes Exchange Server's own support for "Exchange Forms", which are custom interactive forms that can be presented to users of an Exchange system. *See* Section IX.A.4. A POSA would have been familiar with such interactive forms as well.

135. In addition, an interactive form for email is shown in U.S. Patent 6,438,584 (Exhibit 1035) at Fig. 7:

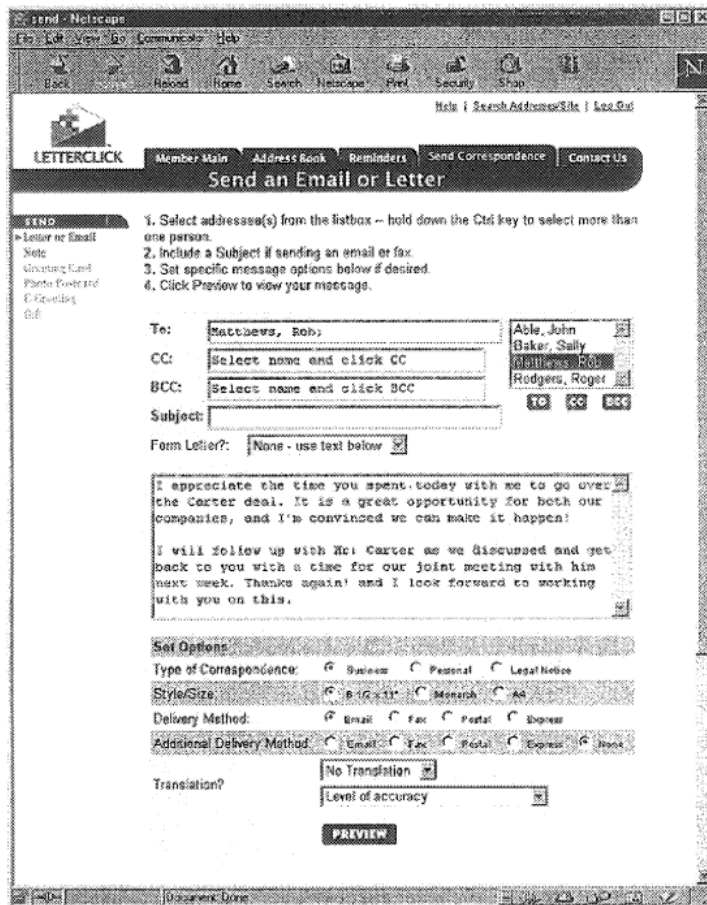


FIG. 7

EX1035 at Fig. 7.

136. As another example, U.S. Patent 6,360,221 (EX1036) describes an interactive form for messages in Fig. 2 and at 4:1-5 (“[S]erver machine 10 ‘hosts’ an e-mail web site 11. A sender at sender machine 12 can ‘upload’ or enter message content to the web site 11 through the Internet 16 as indicated at 13A. This is typically accomplished via a web browser...”):

The screenshot shows the eSprinkles.com website interface. On the left side, there is a vertical navigation menu with links: HOME, ABOUT, SIGN UP, CONTACT, MEMBERS, ACCT, PASSWORD, ENTER, AFFILIATES, DISNEY, and AMAZON. The main content area features the eSprinkles.com logo at the top. Below the logo is a form titled "Do you want that plain, or with esprinkles?" with a "TM" trademark symbol. The form includes fields for TO (TYPE E-MAIL ADDRESS OF RECIPIENTS), FROM (TYPE YOUR NAME), RE (TYPE SUBJECT), and MSG. Below the form is a section titled "CHOOSE YOUR ESPRINKLES (OPTIONAL)" with a grid of categories: BUSINESS, FRIENDS, FAMILY, COMMERCIAL, and AFFILIATES. Each category has a list of options: BUSINESS (URGENT, OPPORTUNITY), FRIENDS (MISSING YOU, LUNCH?, BIRTHDAY), FAMILY (HAPPY ANNIVERSARY, HAPPY FATHER'S DAY), COMMERCIAL (BUY NOW!, UPDATE!), and AFFILIATES (DISNEY, TINKERBELL, MICKEY, AMAZON, BOOKS, VIDEOS). At the bottom of the form are buttons for CLEAR, REVIEW, SEND, and JOIN eSprinkles.com FREE!. Below these buttons are links for BACK, FORWARD, and HOME.

FIG. 2

EX1036 at Fig. 2.

137. See also EX1016 at 3:45-49, 8:15-16, Fig. 13 (disclosing a “sample universal message form”):

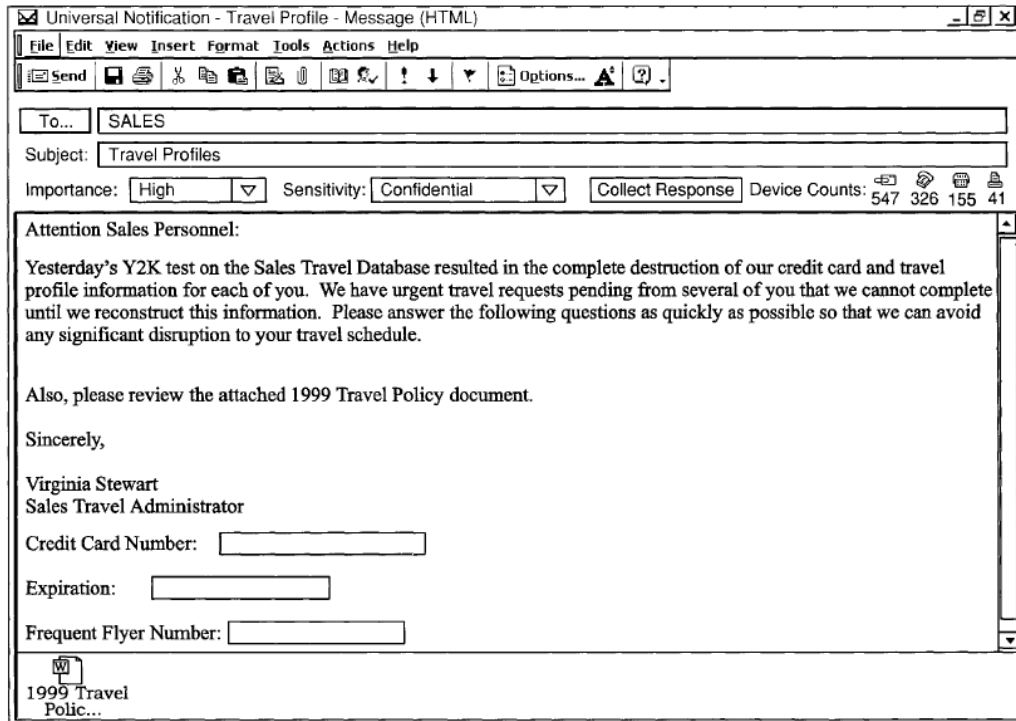


FIG. 13

EX1016 at Fig. 13.

X. ANALYSIS OF THE PATENTABILITY OF '920 PATENT CLAIMS

A. LAW586 IN VIEW OF JOSHI: BACKGROUND, MOTIVATION TO COMBINE AND RESULT OF COMBINATION

138. In addressing the combination of Law586 with Joshi, I first consider the extent of the Law586 disclosure. I understand that Law586 incorporates by reference the patent applications that lead to Law773 and Law845. EX1005 at 1:8-16 (“US Patent Application Number 09/588,443, entitled MESSAGING SYSTEM HAVING RECIPIENT PROFILING and U.S. patent application Ser. No.

09/588,853, entitled RECIPIENT CONTROL OVER ASPECTS OF INCOMING MESSAGES, both of which are specifically incorporated herein by reference.”).

139. Given this incorporation, a POSA would have considered Law586 and the applications for the patents that issued as Law773 and Law845 as a single disclosure. I have been informed and I understand that the law requires Law773 and Law845 to contain the same disclosure as their respective patent applications.

140. When reviewing the disclosure of Law586 (including its specific discussion of Law773 and Law845), a POSA would have incorporated the teachings of Law773 and Law845 into Law586, including by improving the overall functionality and features of Law586.

141. All three references share the same inventor, were filed on the same date, rely upon a similar client-server architecture with one or more databases, and are all directed to the same field (rule-based messaging delivery systems).

142. Law586 is entitled “Information Delivery System for Providing Senders with a Recipient’s Messaging Preferences.” As mentioned, it also incorporates the disclosures of Law773 entitled “Recipient Control Over Aspects of Incoming Messages” and Law845 entitled “Messaging System Having Recipient Profiling”. These disclosures describe how to use profiles to improve the quality of messaging to recipients.

143. In these systems, senders and recipients define profiles for use during messaging. Recipients may indicate “delivery instruction data”, “interest data”, “no interest data”, and “address data”. EX1005 at 4:25-32. The delivery instruction data “may indicate the recipients preferred mode of communication (physical mail, electronic mail, facsimile transmission, voice mail, etc.), combination of modes of communication and/or priority for modes of communication in which to receive messages.” EX1005 at 4:32-37. The “interest data” and “no interest data” may include Standard Industry Code (SIC) numbers describing, for example, “financial institutions, health care providers, legal service providers”, and others. EX1005 at 4:62-5:10. Meanwhile, senders provide “a sender identifier”, “e-mail address”, “physical address”, and a characterization of their own descriptors that may also include SIC numbers “used to categorize the subject matter of the sender’s activities.” Such profiles are stored at the web server and/or data center. EX1005 at 5:19-32, Fig. 4; EX1006 at Fig. 3; EX1007 at Fig. 1.

144. Sender and recipient profiles are used to “more effectively route messages” to recipients, by identifying common interests and avoiding sending unwanted messages. EX1005 at 6:9-28. The messages may be sent by a “data center” that “operate[s] as the message dispatcher” and “reconciles the messages with the recipient preference profiles 190 and takes appropriate measures when dispatching or not dispatching the messages”. EX1006 at 7:50-56. The “data

center” may include or be a “web server” that “may operate as the message dispatcher”, with “senders 155 provid[ing] instructions to the web server 110 that control the messaging process.” EX1005 at 8:15-19. I note that Law586 is written in terms of “web server 110”, while Law773 and Law845 refer to “data center 110”, with all entities numbered 110 playing similar roles.

145. Law586 does not describe the details of standard electronic messaging systems, as it was common knowledge to a POSA. Rather, Law586 states “Because messaging systems are well [known, their] descriptions have been limited for the sake of brevity to only that which is necessary to provide suitable background for an understanding of the present invention.” EX1005 at 4:7-11. As I explain in Section IX.A, messaging systems were indeed in widespread use at the time of the Law586 disclosure (consistent with Law586’s teachings to use “conventional” web servers, email, and client-server communications as I discuss above and below). Therefore, a POSA attempting to realize the system of Law586 would have done so in the context of an existing messaging system, including the Outlook/Exchange/OWA system described in Joshi.

146. Thus, the Law586/Joshi analysis that follows simply describes the outcome of a POSA implementing the ideas of Law586 on a very common messaging platform. In my opinion, the resulting system is a straightforward realization of Law586’s teaching.

147. A POSA would have been motivated to combine the teachings of Law 586 and Joshi, and would have understood it would work, including because Law 586 describes utilizing “conventional” “Web server application software,” to implement its messaging system. Microsoft Exchange with OWA, as described by Joshi, was a conventional web server software and system. EX1029 at 2 (“Exchange is the new reality of messaging technology to which other vendors are striving.”), 24 (“[T]he browser is using the Outlook Web Access components installed on the Exchange server,”), 88 (“Exchange Server is a part of the BackOffice suite of server products that runs on top of the Windows NT operating system”).

148. I also note that Joshi discloses that its system would commonly be used to set up third-party utilities or custom applications (such as in Law 586). EX1029 at 39 (“In addition to the tools and sample applications provided by Microsoft, many utilities for exchange are available from third party companies.”), 8 (“Exchange’s Outlook Forms Designer tool is simple enough for users to create basic forms, and powerful enough for experienced developers to create form-based applications.”). Accordingly, in the combined system of Law 586 and Joshi, a POSA would logically have thought to run Microsoft Exchange with Law 586 to provide a robust system that enabled efficient message management, storage and

distribution, controlled by the preferences of users (including senders and recipients), and using form-based applications.

149. A POSA would have been motivated to and had a reasonable expectation of success of incorporating the teachings of Joshi into Law586 including because Joshi provides additional details about the routine, standard and well-known implementation of creating, sending, receiving, and storing email and other messages using Outlook, Outlook Web Access, and Exchange. A POSA would also have found it advantageous, for example, to incorporate into Law586 Joshi's specific teachings about message input forms, transmittal and storage (as well as the general understanding of a POSA)—which I discuss above and below—both because it was consistent with Law586's teachings and because the system Joshi teaches is mature and widely known to those of skill in the art.

150. A POSA implementing Law586 would have used these explicitly taught techniques, as I explain next. Law586 illustrates its entities in its Figure 4:

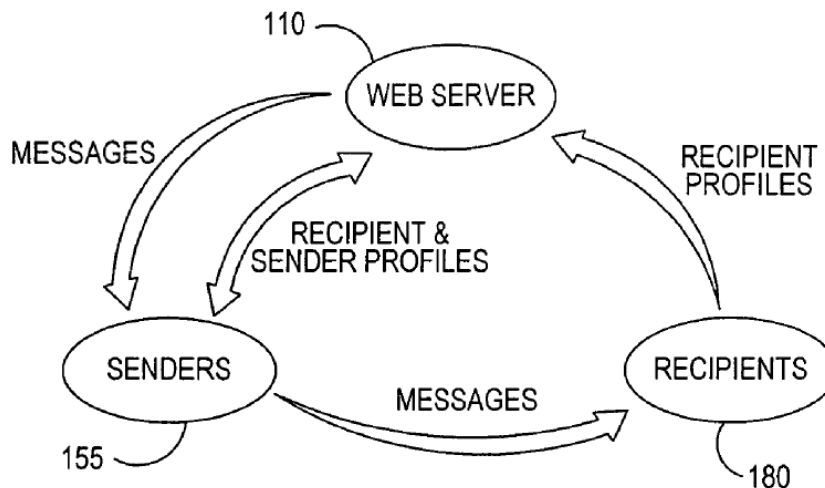


FIG. 4

EX1005 at Fig. 4.

151. A POSA would have implemented Law586 in a manner consistent with the Exchange and OWA disclosures described in Section IX.A above.

Specifically:

- a. The web server 110 would include both the OWA web server and the Exchange Server. See Section IX.A.4 and its discussion of the teaching that OWA and Exchange may be installed on the same server computer. (I note also that it was also known at the time of Law586 that a web server 110 can be implemented as a distributed application on multiple computers. This was a topic, for instance, of a 1998 paper I coauthored entitled “Distributed Packet Rewriting and its Application to Scalable Server Architectures”. EX1037.)

- b. The message recipients 180 would access the web server 110 to control recipient profiles using a web site. For example, this could be done using “Recipient Profile Exchange Forms” that specify certain “rules,” and/or by specifying Exchange Rules. See the discussion of “Recipient Profile Specification” below beginning at ¶ 152. These recipient profiles would be stored on the web server 110 for Exchange Server.
- c. SIC (standard industry code) numbers and other data within the sender profile that Law586 teaches is “established by the sender” (EX1005 at 6:9-33) would be similarly provided by the sender using a web site. For example, this could be done using “Messenger Profile Exchange Forms.” See Section IX.A.4. Thus, the message senders 155 would access the web server 110 to control sender profiles at least by specifying messenger data, including messenger identifying data. The messenger data would be stored on the web server 110 for Exchange Server.
- d. To transmit messages from senders 155 to recipients 180, the senders 155—whether sending via OWA or an Outlook client—would accomplish this by transmitting the messages to the Exchange server within web server 110, instructing it to send the messages, and the

Exchange server and its MTA would apply messaging policy and route the message towards recipients. For example, this could be done by sending a message in the traditional manner native to Outlook/OWA, or by posting a message using a “Message Exchange Form” to Exchange within web server 110. See Section IX.A.1 and Section IX.A.4.

- i. Law586 specifically discloses this architecture, writing “As another example, the web server 110 may operate as the message dispatcher. Thus, the senders 155 provide instructions to the web server 110 that control the messaging process.” EX1005 at 8:15-19.
- ii. Similarly, the Law773 portion of Law586 discloses that “As another example, the control systems of the data center 110 and the messaging systems 150 may operate cooperatively such that various tasks and operations described above may occur at either location. As yet another example, the data center 110 may operate as the message dispatcher. Thus, the messaging systems 150 generate the messages and upload them to the data center 110. Then, the data center reconciles the messages with the recipient preference profiles 190 and takes appropriate

measures when dispatching or not dispatching the messages as discussed above.” EX1006 at 7:47-56.

152. **Recipient Profile Specification.** At a high level, the combination of Law586 with Joshi would naturally result in the combination of the features of both references. Specifically, recipients would be able to specify their recipient profile preferences according to Law586’s explicit teaching and they also would be able to use Outlook/Exchange/OWA’s features for specifying recipient preferences via Exchange Rules as well. A POSA would make an engineering choice for implementation that leverages Outlook/Exchange/OWA capabilities to these ends. The POSA would recognize the straightforward and user-friendly option of using Exchange Forms for all related recipient preference specifications, including Law586’s recipient profile preferences as well as the Exchange rules that select messages for action. See Sections IX.A.4 and IX.A.3. Thus, one or more Exchange Forms would allow a recipient to, e.g., associate SIC codes, date ranges, messenger identities, sizes, whether messages have attachments, etc., with corresponding delivery instructions. I refer to these Exchange Forms as Recipient Profile Exchange Forms.

153. In one example of an alternative implementation, a POSA would use the existing Outlook/Exchange/OWA mechanisms to allow recipients to specify Exchange Rules and use the Recipient Profile Exchange Forms to specify those

recipient preferences that are not expressible within the standard Exchange Rules. A POSA would recognize that while this would create a more complicated user experience for the recipients, it would nonetheless combine the Law586 teaching with the Joshi and Outlook/Exchange/OWA teachings and result in the same system capabilities related to obeying recipient preferences.

154. I give further details in the element-by-element analysis sections below.

155. These understandings are consistent with Law586, including its teaching to provide senders with recipient messaging preferences so that those preferences may be applied when messages are sent. Recall that Law586 is entitled “Information Delivery System for Providing Senders with a Recipient’s Messaging Preferences” and states that “For each of the recipient preference profiles in the log of recipient profiles, the web server provides a change notification to the particular sender of a change in the recipient preference profile.” EX1005 at Abstract.

Law586 further states that “The notification setting data 195e define how the web server 110 is to communicate with the sender 155.” *Id.* at 5:32-34. However, Law586 also teaches that “As another example, the listing of the ID data 190a, along with a revision level or date, from all of the recipient profiles 190 that the sender 155 has accessed may be stored along with the sender profile 195 at the web server 110. In this manner, the listing may be interrogated by the web server 110

on any periodic basis and without the need for the sender 155 to initiate a communication session.” *Id.* at 6:58-65. As excerpted above, the Law773 portion of Law586 also teaches that “the data center 110 may operate as the message dispatcher” and “the data center reconciles the messages with the recipient preference profiles 190 and takes appropriate measures when dispatching or not dispatching the messages as discussed above.” EX1006 at 7:50-56.

156. Therefore, Law586 teaches that storing recipient preference profiles at the web server 110 does make the recipient profile information available to the sender for use in sending messages in accordance with its aims. Accordingly, a POSA implementing the Law586/Joshi combination by implementing Law586 on an Outlook/Exchange/OWA system would understand that storing recipient preference profiles on the web server 110 including the Exchange server would operate consistently with Law586’s teaching.

157. For example, as a Law586/Joshi recipient, I could create a preference under my own “David Martin” identity indicating that messages e-mailed to me between June 10-18 from Standard Industry Code (SIC) 2100 (for auto rental companies) should be directed to the Exchange address DMARTIN. This would represent my general policy. Meanwhile, owing to a specific business relationship, I could also specify that messages during that same time period from the specific

sender Acme Auto Rentals should be directed via fax to the telephone number (515) 292 1212. I revisit this example in ¶ 253.

B. LAW586 IN VIEW OF JOSHI RENDERS OBVIOUS CLAIMS 1-11 AND 14-18

158. In my opinion, Law586 in view of Joshi discloses all of the limitations of claims 1-11 and 14-18, considered as a whole. As explained herein, in my opinion, Law586 in view of Joshi renders obvious claims 1-11 and 14-18. I note that the claims are all obvious for the same reasons including those that I present below and in connection with claim 1.

1. Claim 1

159. In my opinion and as explained below, the combination of Law586 and Joshi discloses and renders obvious claim 1.

1[pre] “An electronic message management system comprising:”

160. In my opinion, Law586 discloses the preamble, regardless of whether it is limiting. Law586 is entitled “Information Delivery System for Providing Senders with a Recipient’s Messaging Preferences” and discloses messaging system components in Fig. 1 including a web server 110 that communicates over the Internet with various sender computers 155 and recipient computers 180:

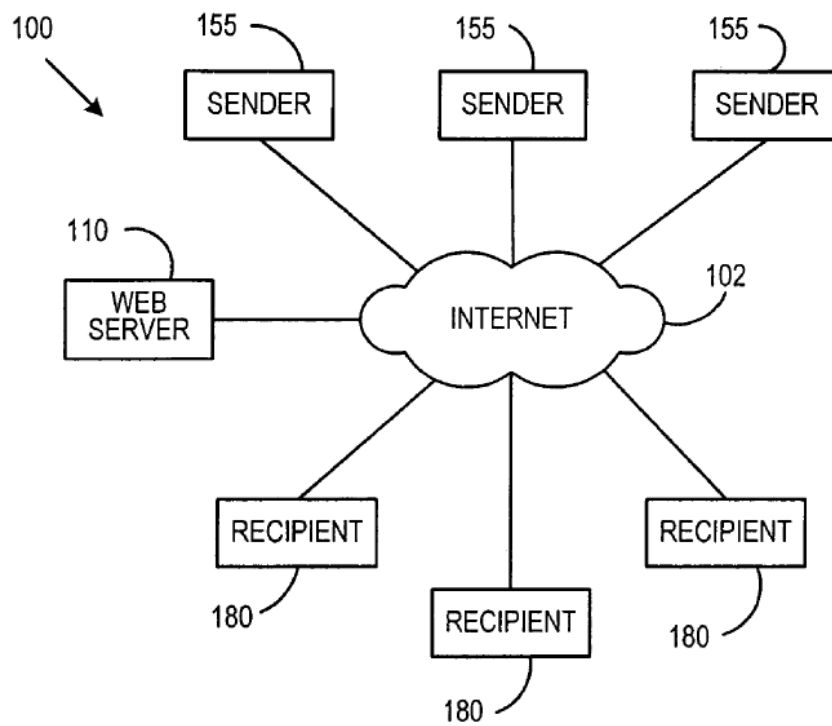


FIG. 1

161. Law586 Fig. 4 shows one way that the system components interact:

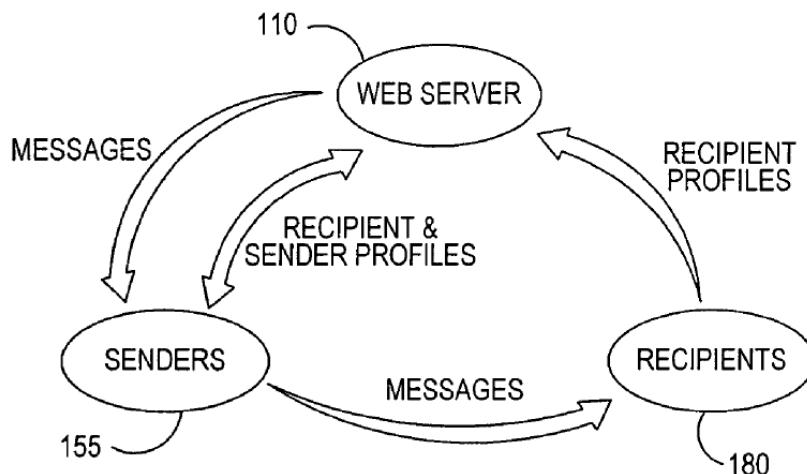


FIG. 4

162. Law586 further discloses that its messages include “electronic mail”. EX1005 at 4:3-11, 4:32-37, 5:26-27. Law586’s “Summary of the Invention” states “The present invention provides [an] information delivery system and methods for improving the collection and dissemination of recipient preferences for messages. Generally, this is accomplished by collecting recipient preference data and making it available to a plurality of senders for their use in preparing messages intended for a selected recipient,” and expands on these ideas throughout its specification. EX1005 at 2:25-30, *see also* 1:19-24, 3:5-9, 3:27-61. A POSA would understand that these activities provide for “electronic message management”.

163. In my opinion, the Law586/Joshi combination also discloses the preamble, regardless of whether it is limiting. In the Law586/Joshi combination, a POSA would understand that Law586 implemented in an Outlook/Exchange/OWA

environment would also constitute an “electronic message management system”, for the additional reason that Outlook and OWA rely on Exchange for sending, receiving, and storing electronic messages.

1[a] “an electronic computer system in operative communication with a global digital communications network, and an electronic message management database in operative communication with the computer system; the electronic computer system having”

164. In my opinion, Law586 discloses limitation 1[a].

165. Law586 discloses:

Generally, the web server 180 collects message preference data from the recipients 180 and makes it available to the senders 155 so that the senders 155 may more efficiently and effectively communicate their messages to the recipients 180. Therefore, those skilled in the art will recognize that the web server 110 may employ any suitable combination of computer hardware and software (control system) to facilitate the storage, access and processing of information and various communications that are required as described in greater detail below.

EX1005 at 3:38-47; *see also* 3:27-38.

The recipient preference profile 190 is preferably stored in any suitable memory device (database server, memory farm, hard disk, etc.) as part of or operatively connected to the web server 110 and defines various parameters intended to control aspects of messages sent by the senders 155 that are intended for the recipient. Those skilled in the art will recognize that the parameters defined below are mutually exclusive and may be employed in any combination.

Id. at 4:18-24.

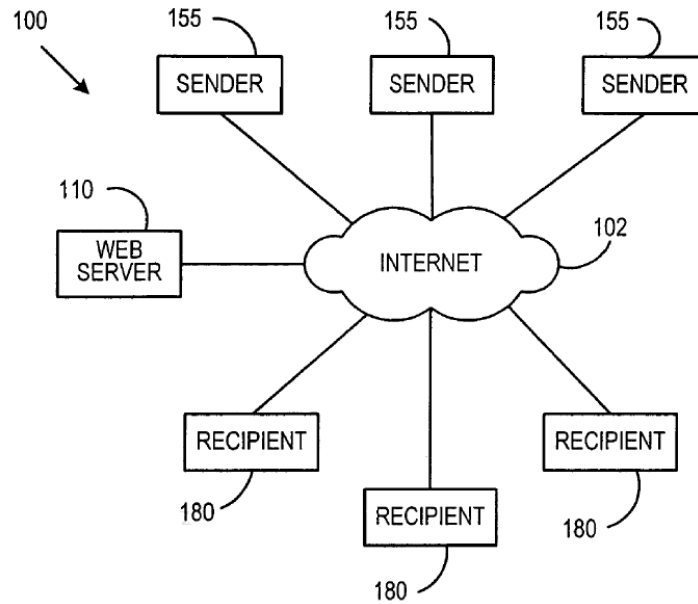


FIG. 1

Id. at Fig. 1.

166. A POSA would understand that the web server 110 is an “electronic computer system.” Note that Law586 discloses that the server may be “any computer system (hardware, operating system, Web server application software, TCP/IP protocols and the Web site content or pages) that provides World Wide Web services on the Internet.” EX1005 at 3:27-38.

167. Note also that Law586 (at 4:18-24 quoted above) expressly discloses that a database may be operatively connected to the web server and that such database is where the recipient profile is stored.

168. The '920 Patent specifically describes the Internet and the World Wide Web (based on the Internet) as examples of a known global digital communications network:

FIG. 1 shows several computer systems 20, 22, 40-43 coupled together through a network 11, such as a LAN, WAN or a global digital communications network, such as the World Wide Web or the Internet. The term "Internet" as used herein refers to a network of networks, which uses certain protocols, such as the TCP/IP protocol, and possibly other protocol such as the hypertext transfer protocol (HTTP) for a hypertext markup language (HTML) documents that make up the World Wide Web. The physical connectivity scheme of the Internet and the communication protocols and procedures of the Internet are well known in the art.

EX1001 at 5:9-20.

169. Therefore, a POSA would understand that the Law586 web server 110 is "in operative communication with a global digital communications network", namely the Internet 102 as shown in Law586's Figure 1 above, and expressly disclosed in Law586.

170. This claim part uses the term "database". I incorporate herein my discussion of that term as it is used in the '920 patent from Section VI.A beginning at ¶ 41.

171. A POSA would understand that a web server accesses a "database" at least for retrieval of the content that the web server makes available to web browsers. In addition, I discuss further Law586's access of the message

management database and recipient and messenger profile databases in my analysis of further limitations of claim 1.

172. For all these reasons, a POSA would understand that Law586's electronic message management database is "in operative communication with the computer system". In fact, Law586 expressly discloses such database in operative communication with the web server, as I indicated above.

173. In my opinion, the Law586/Joshi combination also discloses limitation 1[a]. In the Law586/Joshi combination, the web server 110 including the OWA web server and the Exchange server is also an "electronic computer system" running over the Internet, *i.e.*, "in operative communication with a global digital communications network." The OWA web server and Exchange server stores and accesses many different types of information about its senders, recipients, rules, messages, and so on, and therefore comprises a "database". In addition, I discuss further Law586/Joshi's access of the message management database and recipient and messenger profile databases in my analysis of further limitations of claim 1 below. Thus, a POSA would understand that the Law586/Joshi electronic messaging management database is "in operative communication with the computer system".

1[b] "a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database, the profile data including delivery parameters specified by a recipient of where, when and how

specific types of messages from specific messengers are delivered to the recipient”

174. In my opinion, Law586 discloses limitation 1[b]. In addition, the Law586/Joshi combination also discloses and renders obvious limitation 1[b]. I discuss this limitation 1[b] in multiple sections below.

1[b] “a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database...”

175. A POSA would understand that the code implementing the Law586 functionality that is used to view and control recipient profile data corresponds to the recipient profile application. Law586 describes this functionality of the “web server 110” as follows.

Generally, the web server [110]¹⁰ collects message preference data from the recipients 180 and makes it available to the senders 155 so that the senders 155 may more efficiently and effectively communicate their messages to the recipients 180. Therefore, those skilled in the art will recognize that the web server 110 may employ any suitable combination of computer hardware and software (control system) to facilitate the storage, access and processing of information and various communications that are required as described in greater detail below.

EX1005 at 3:38-47; *see also* 3:27-37, 4:11-17, Figures 1, 2.

¹⁰ Although Law586 literally states “web server 180” here, this is clearly a typographical error. *See* the following sentence of the same passage, Fig. 4, and the twenty-six other references to “web server 110” in the ’586 Patent Specification.

Both recipients 180 and senders 155 provide data to the web server 110. Generally, the recipients 180 may establish their respective recipient preference profiles 190 with the web server 110 during a communication session in any conventional manner. Similarly, the senders 155 may establish their respective sender profiles 195 with the web server 110 during a communication session in any conventional manner. Those skilled in the art will recognize that the use of appropriate menu and/or command driven web pages that allow the recipient and sender to log on to and provide the sought after information described above may be accomplished in any conventional manner.

EX1005 at 5:45-56.

176. An example recipient profile is disclosed in Figure 2 of Law586:

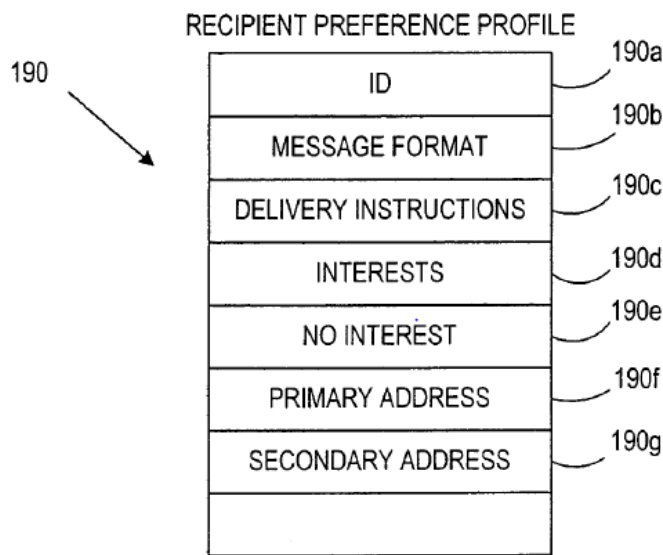


FIG. 2

See also EX10005 at 3:10-14, 4:25-57 (describing same).

177. Since Law586 obtains and receives recipient profile data at the web server, a POSA would understand that it receives it via “the global network” that is the Internet.

178. Law586 explicitly describes storing the recipient preference profile in a database server: “The recipient preference profile 190 is preferably stored in any suitable memory device (database server, memory farm, hard disk, etc.) as part of or operatively connected to the web server 110 and defines various parameters intended to control aspects of messages sent by the senders 155 that are intended for the recipient.” EX1005 at 4:18-23. This list of possibilities naming “any suitable memory device” also satisfies claim 1[a]’s limitation of “database”. See also my discussion of the “database” term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41.

179. Since sender profiles, recipient preference profiles, and messages are each distinct kinds of data in Law586, a POSA would understand that when Law586 stores its recipient profile data, it would store the data in what would reasonably be described as a “recipient profile database,” as I discussed above regarding claim 1[a]. Since the recipient profile database is part of a system relating to message management and providing access to data other than recipient profiles, a POSA would also understand that the recipient profile database is part of the system’s broader message management database.

180. In the Law586/Joshi combination, the code that “collects message preference data from the recipients 180 and makes it available to the senders 155” (EX1005 at 3:38-47) is present at least on the web server 110 that includes both Exchange and OWA. In the case of a recipient running Outlook, Exchange code on web server 110 would obtain and receive the recipient data, *e.g.*, by presenting a Recipient Profile Exchange Form in the conventional manner. A POSA would understand that the code implementing this functionality corresponds to the recipient profile application. In the case of a recipient using a web browser to access OWA, the OWA code on web server 110 would also receive the recipient data before the Exchange code receives the recipient data, *e.g.*, by presenting a Recipient Profile Exchange Form in the conventional manner. A POSA would understand that the code implementing this functionality—either the OWA code, the Exchange code, or both in combination—satisfies the “recipient profile application” limitation.

181. The disclosure of a recipient profile application is further confirmed by Law586’s disclosure that a POSA “will recognize that the use of *appropriate menu and/or command driven web pages* that allow the recipient and sender to log on to and provide the sought[-]after information described above may be accomplished *in any conventional manner.*” EX1005 at 5:46-55 (emphasis added); *see also* 3:33-47 (“In conventional fashion, the web server 110 may be any

computer system” such as “hardware,” “operating system,” “*Web server application software*” and “Web site content or pages” “that provides World Wide Web services on the Internet,” or “*any suitable combination* of hardware and software (control system) to facilitate the storage, accessing, and processing of information and various communications that are required as described in greater detail below.”) (emphasis added).

182. It is also confirmed by the Law773 portion of Law586 that discloses the conventionality of “an application software program executed by the data center 110 control system” to “access[] [using] any suitable technique” the “recipient preferences profiles 190.” EX1006 at 4:43-47.

183. Notably, this is also consistent with the '920 Patent's conventional description that “recipient profile software application” “include[s] a recipient profile input form” that would be “displayed at a recipient's client computer ... as a web page,” EX1001 at 6:33-40, and its admission that “[t]he physical connectivity scheme of the Internet and communication protocols and procedures of the Internet are well known in the art,” including “[HTML] language documents that make up the World Wide Web,” EX1001 at 5:13-20.

184. Since the Law586/Joshi receives recipient profile data at the web server 110 including the Exchange server, a POSA would understand that it receives it via “the global network” that is the Internet.

185. Since sender profiles, recipient preference profiles, and messages are each distinct kinds of data in Law586/Joshi, a POSA would understand that when Law586/Joshi stores its recipient profile data, it would store the data in what would reasonably be described as a “recipient profile database” on the web server 110 for Exchange Server. Since the recipient profile database is part of a system relating to message management and providing access to data other than recipient profiles, the POSA would also understand that the recipient profile database is part of the system’s broader message management database.

1[b] “the profile data including delivery parameters specified by a recipient of where, when and how specific types of messages from specific messengers are delivered to the recipient”

186. A POSA would understand that the recipient profile preferences in Law586 correspond to “delivery parameters specified by a recipient of where, when and how specific types of messages from specific messengers are delivered to the recipient”.

187. Law586 teaches that:

Recipients 180 receive messages if they want them, in the format they want, when they want and where they want. By allowing recipients to control aspects of their incoming messages, their satisfaction is increased. Also, by utilizing the web server 110, faster updating of new addresses to senders is achieved because for updates need only occur at a single source. Thus, the delays and costs associated with the traditional practices described above are substantially alleviated.

EX1005 at 5:67-6:8; *see also* 4:25-62.

188. Law586 teaches that recipient preference profiles include a rich collection of information specified by the recipient and controlling how the recipient prefers to receive messages.

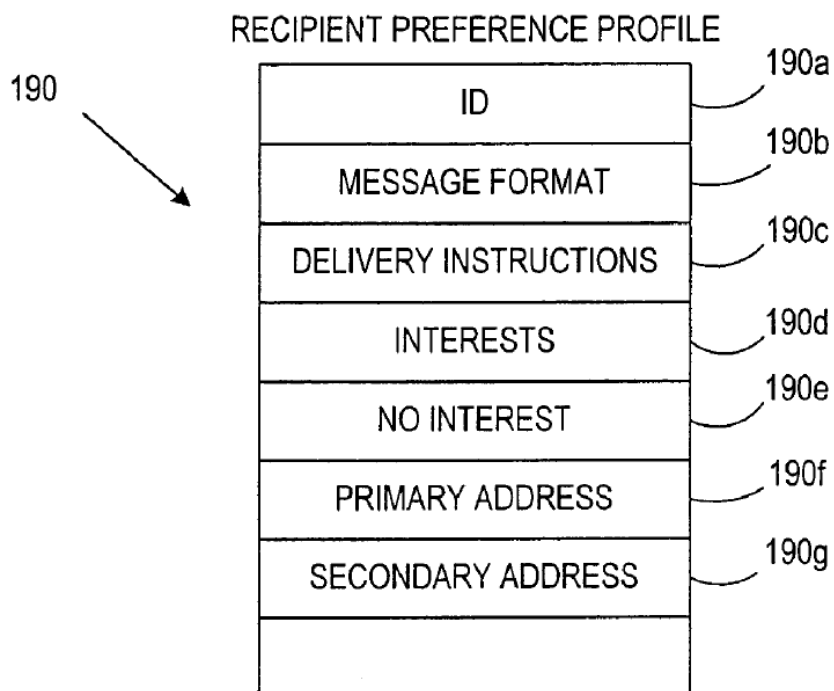


FIG. 2

The recipient preference profile 190 may include: a recipient identifier or ID data 190a; message format data 190b; delivery instruction data 190c; interest data 190d; no interest data 190e; primary address data 190f and secondary address data 190g. The recipient ID data 190a may be a name (individual, household or business) or any other suitably unique identifier (alphanumeric, etc.) and simply distinguishes the recipient 180 from other recipients 180. The message format data 190b may indicate the recipient's preferred mode of communication

(physical mail, electronic mail, facsimile transmission, voice mail, etc.), combination of modes of communication and/or priority for modes of communication in which to receive messages. The delivery instruction data 190c indicates if any optional delivery preferences, such as: hold messages, temporary reroute messages, etc.; are active. For example, a hold message instruction may be utilized by the recipient 180 when the recipient 180 is not available (vacation, business travel, etc.) to receive messages. As another example, the temporary reroute messages instruction may be utilized by the recipient 180 when the recipient 180 wished to have messages sent to an alternate address 190g (described below) during selected time periods, such as: vacation addresses and the like. The interest data 190d indicates if the recipient 180 has any desire to hear from particular types of senders. The no interest data 190e indicates if the recipient 180 has any desire to not hear from particular types of senders. The primary address data 190f represents the default address (postal delivery, electronic mail, phone number, etc.) to which messages should be sent. If the recipient 180 moves, then the primary address data 190f may be updated by the recipient 180 to reflect a new address. Analogously, the secondary address data 190g represents an alternate address to which messages should be sent if directed so by the delivery instruction data 190c.

EX1005 at 4:25-58.

189. Law586 teaches that the recipient preference profile fields 190d and 190e control which messages are transmitted to recipients.

For example, the interest data 190d and the no interest data 190e may be established by the senders 155 to more effectively route messages to the intended recipient 180. Using the interest data 190d, the senders 155 may scan the profiles 190 looking for recipients 180 that are likely to be interested in their messages (solicitations, informational communication, etc.). Thus, the senders 155 would

achieve greater effectiveness on their message delivery programs because they would have an indication the certain recipients 180 have a previously acknowledged interest in a particular industry or industries. On the other hand, using the no interest data 190e, the senders 155 may also increase the effectiveness of their message delivery programs while reducing costs. While scanning the profiles 190 in general or accessing profiles 190 for recipients 180 that have already be designated to receive a message, the sender may terminate further processing of certain messages by out sorting any recipients that have provided an indication that they are not likely to be interested in any messages (solicitations, information communication, etc.) from a particular industry or industries. In other words, messages intended for such recipients will be terminated (not generated, not dispatched, etc.). Thus, the senders 155 would save costs by foregoing to dispatch any messages to these recipients 180. Additionally, these recipients 180 benefit in that the receipt of undesired messages does not distract them.

EX1005 at 6:9-33; *see also* 4:25-5:10, 5:67-6:4.

190. Law586 teaches that “where” messages are delivered is under recipient control, including by recipient preference profile fields 190f (“default address (postal delivery, electronic mail, phone number, etc.) to which messages should be sent”) and 190g (“an alternate address to which messages should be sent if directed so by the delivery instruction data 190c”). EX1005 at 4:50-58.

191. In the Law586/Joshi combination, a POSA would understand that the default and alternate address fields 190f and 190g would accommodate addresses referring to Exchange Mailbox, Fax, Voice Mail, Cc:Mail, Microsoft Mail,

MacMail, Internet (SMTP), and X.400 destinations. *See* Section IX.A.2. These constitute further examples of recipient control of “where” messages are delivered.

192. In the Law586/Joshi combination, a POSA would additionally understand that “where” messages are delivered is controlled by rules under recipient control, and that these rules may route messages to Exchange Mailbox, Fax, Voice Mail, Cc:Mail, Microsoft Mail, MacMail, Internet (SMTP), and X.400 destinations. *See* Section IX.A.3. The use of these rules constitutes further examples of recipient control of “where” messages are delivered. As I explained in Section X.A beginning at ¶ 152, a POSA would recognize that these rules may be expressed within one or more Recipient Profile Exchange Forms.

193. Law586 teaches that “when” messages are delivered is under recipient control, including by recipient profile field 190c: “delivery instruction data [that] indicates if any optional delivery preferences, such as: hold messages, temporary reroute messages, etc.; are active. For example, a hold message instruction may be utilized by the recipient 180 when the recipient 180 is not available (vacation, business travel, etc.) to receive messages. As another example, the temporary reroute messages instruction may be utilized by the recipient 180 when the recipient 180 wished to have messages sent to an alternate address 190g (described below) during selected time periods, such as: vacation addresses and the like.”

EX1005 at 4:37-46.

194. In the Law586/Joshi combination, a POSA would understand that similar rules route incoming messages in a manner depending on the dates when the messages are received. *See* Section IX.A.3. This constitutes a further example of recipient control of “when” messages are delivered.

195. Law586 teaches that “how” messages are delivered is under recipient control, including by recipient preference profile field 190b, described as follows: “The message format data 190b may indicate the recipient’s preferred mode of communication (physical mail, electronic mail, facsimile transmission, voice mail, etc.), combination of modes of communication and/or priority for modes of communication in which to receive messages.” EX1005 at 4:32-37. In the Law586/Joshi combination, this support for “how” messages are delivered would be provided as well.

196. A POSA would understand that the application of the rules taught by Law586 would be compatible with Joshi, because Joshi teaches similarly that Exchange supports the use of various customization options, such as Exchange Forms. For example, a recipient could fill out and submit a “Recipient Profile Exchange Form” including the recipient preference profile 190 information. Upon submission, Exchange would receive the recipient profile data and store it for later use. This constitutes a specific way in which recipients may specify “where, when and how” messages are processed.

1[b] “delivery parameters [depending on] specific types of messages”

197. This claim part uses the term “specific types of messages”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 48.

198. Law586 discloses “specific types of messages” originating from the messenger and referred to by the recipient’s preferences. These include Law586’s “types of industry segment” codes and corresponding sender profile field 195d and recipient interest/no-interest fields 190d and 190e and “preferred mode of communication” of recipient preference profile field 190b together with Law586’s determination of the mode of communication used in a message according to whether it was sent by “electronic mail, facsimile transmission, voice mail”, etc.

199. Therefore, in my opinion, a POSA would find that the Law586 reference satisfies the “delivery parameters [depending on] specific types of messages” limitation.

200. In the Law586/Joshi combination, a POSA would understand that “specific types of messages” characterizations are also present in the message delivery mechanism, message content, and message headers originating from the messenger. Through the use of “rules”, recipients may determine the manner in which specific types of messages are delivered to the recipient, including through dependencies on the message sender, the message addressee, the message content,

the MIME “Content-Type”, and other message headers. *See* Section IX.A.3. As I explained in Section X.A beginning at ¶ 152, a POSA would recognize that these rules may be expressed within one or more Recipient Profile Exchange Forms. Through the use of Recipient Profile Exchange Forms, recipients may additionally determine the manner in which specific types of messages are delivered to the recipient, including through the Law586 recipient preference profile fields 190.

201. Therefore, in my opinion, a POSA would find that the Law586/Joshi system’s message content, message header, and Exchange Rules and Recipient Preference Exchange Form capabilities based on those entities also satisfy the “delivery parameters [depending on] specific types of messages” limitation.

1[b] “delivery parameters [depending on] specific types of messages from specific messengers”

202. To the extent that Law586 does not expressly disclose configuring the delivery parameters for messages “from specific messengers” as opposed to messages from “particular types of senders”, it would have been obvious to a POSA for multiple reasons.

203. Law586 teaches a scheme for associating specific senders with “well known industry segments” by using “Standard Industry Code (SIC) system” codes in both recipient preference profiles and sender profiles:

The interest data 190d and the no interest data 190e include indications of types of industry segments that the recipient may or may not, respectively, wish to hear from.

These data 190d and 190e may be captured in any conventional manner. One system for available for use is the Standard Industry Code (SIC) system that assigns SIC numbers for a variety of well known industry segments. As examples, automobile rental companies would be assigned a SIC number in the range of 2100 to 2199, while automobile dealerships would be assigned a SIC number in the range of 2400–2499 and service stations would be assigned a SIC number in the range of 4000 to 4099. Still other SIC numbers exist for financial institutions, health care providers, legal service providers, professional associations, utility service providers, governmental agencies and a variety of 5 other industry segments. Accordingly, SIC numbers corresponding to industries that the recipient 180 desires to hear from could be placed in the interest data 190d while SIC numbers corresponding to industries that the recipient 180 does not want to hear from could be placed in the no interest data 190e.

EX1005 at 4:58-5:11.

204. In other words, Law586 associates individual senders with industry segments via the SIC system, effectively assigning one or more SIC number to each sender. Law586 also teaches that “These data 190d and 190e may be captured in any conventional manner.” EX1005 at 4:61-62.

205. A POSA would understand that the fields 190d, 190e, and 195d may also be conventionally used in a manner that assigns each unique sender a unique code number in addition to the Standard Industry Code numbers. For example, an implementer of Law586 would simply reserve code numbers in the range 0 to 9,999 to refer to existing Standard Industry Code classifications, while also assigning code numbers in the range 10,000 to 4,294,967,295 to individual

senders. This scheme would allow for the assignment of a unique identifier to over four billion potential senders. Since such numbers may be stored in a single memory location on a 32-bit computer in common use in the late 90s, the software used for implementation of a Law586 system is likely to require very few changes—perhaps none at all—to accomplish this. The basic understanding and use of Law586 remains the same: senders are identified by a list of numbers in the sender profile field 195d, while recipients indicate their desire to hear from, or not hear from, senders by controlling the code numbers in the recipient preference profile fields 190d and 190e. However, each recipient may also indicate their desire to hear from specific senders or not hear from specific senders by simply including or not including the corresponding numbers in the recipient preference profile fields 190d and 190e. Again, while this approach involves the use of a potentially large set of SIC numbers, it is entirely consistent with the functionality described by Law586.

206. This per-sender identification capability benefits both message recipients and message senders. It benefits recipients because it allows them to more precisely control which senders they do or do not wish to receive communications from without obligating recipients to make any such choices. After all, different senders may appeal to recipients differently even when the senders are in the same industry category. It also benefits message senders,

because increasing message recipient satisfaction tends to improve senders' ability to reach recipients effectively.

207. In the Law586/Joshi combination, recipients also have extensive control over the handling of messages at least through the creation and use of messenger-specific Exchange Rules. For example, an implementation of Law586 on an Outlook/Exchange/OWA system would include Law586's ability to allow recipients to express "desire to hear from particular types of senders" or "desire to not hear from types of senders" using the "types of industry segment" codes, *e.g.*, within Recipient Profile Exchange Forms. In addition, Law586 on an Outlook/Exchange/OWA system would also allow recipients to create rules causing the routing and final destination of messages to depend on the specific individual senders, since the Exchange Rules capability of routing messages based on who the message is "from" is inherent in Outlook/Exchange/OWA. *See* Section IX.A.3. As I explained in Section X.A beginning at ¶ 152, a POSA would recognize that these rules may also be expressed within one or more Recipient Profile Exchange Forms.

208. Finally, I note that it was otherwise well known that recipients can specify delivery parameters of where, when and how messages from specific messengers are delivered to the recipient. *See* Section IX.B (Greenspun) and Section IX.C (Skladman).

1[c] “a messenger profile application for receiving messenger profile data from messengers via the global network and storing the messenger data in the database, including messenger identifying data”

209. In my opinion, Law586 discloses limitation 1[c].

210. This claim part uses the term “database”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41.

211. A POSA would understand that the code implementing the Law586 functionality that is used to view and control sender profile data corresponds to the messenger profile application. Law586 describes this functionality of the “web server 110” as follows.

Both recipients 180 and senders 155 provide data to the web server 110. Generally, the recipients 180 may establish their respective recipient preference profiles 190 with the web server 110 during a communication session in any conventional manner. *Similarly, the senders 155 may establish their respective sender profiles 195 with the web server 110 during a communication session in any conventional manner.* Those skilled in the art will recognize that the use of appropriate menu and/or command driven web pages that allow the recipient and sender to log on to and provide the sought after information described above may be accomplished in any conventional manner.

EX1005 at 5:45-56 (emphasis added); *see also* 3:27-4:11.

212. Since Law586 receives sender profile data at the web server, a POSA would understand that it receives it via “the global network” that is the Internet.

213. Law586 illustrates the sender profile and illustrates being received by the web server 110 in Figures 3 and 4:

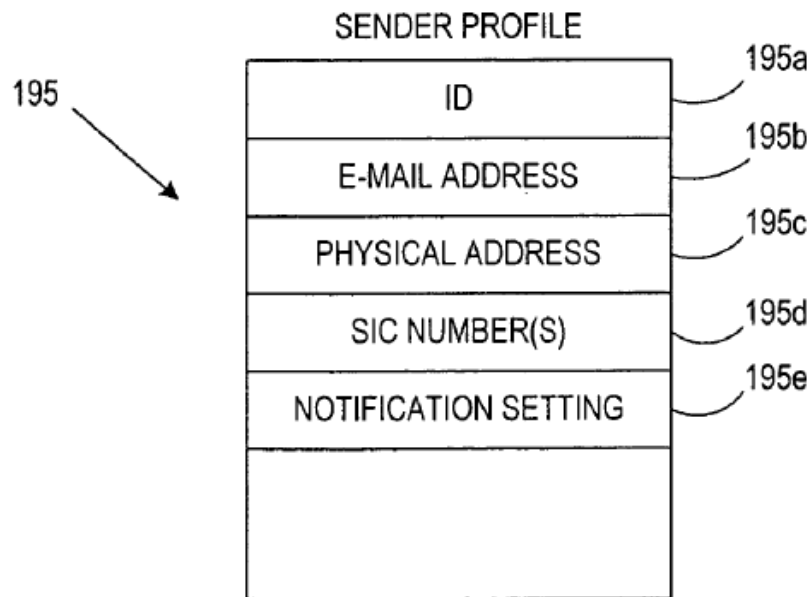


FIG. 3

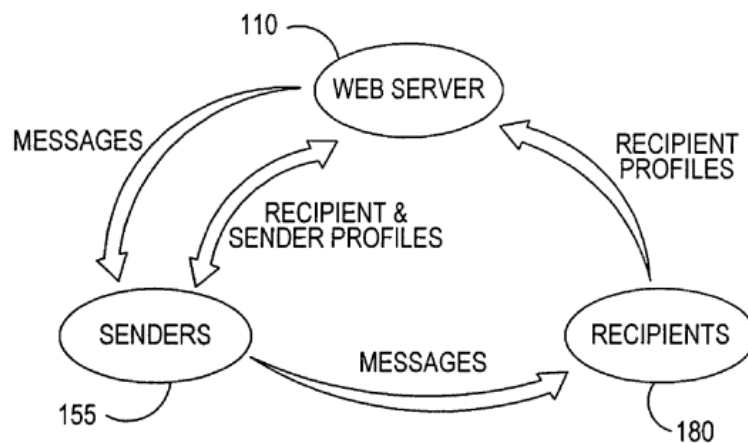


FIG. 4

214. Law586 explains the sender profile fields as follows:

FIG. 3 is a schematic representation of a template for a sender profile describing various parameters intended to control aspects of how and when the web server communicates recipient preference profile data to the sender, in accordance with the present invention.

EX1005 at 3:14-18.

The sender profile 195 is established by the sender 155 and may include: *a sender identifier or ID data 195a*; an e-mail address 195b; a physical address 195c; a series of SIC numbers 195d describing the sender; and notification setting data 195e. *The sender ID data 195a may be a name (individual, household or business) or any other suitably unique identifier (alphanumeric, etc.) and simply distinguishes the sender 155 from other senders 155.* The e-mail address 195b provides an electronic point of contact for the web server 110 to transmit messages to that are intended for the sender 155. The physical address 195c represents a street address for the sender 155. The series of SIC numbers 195d are, as defined and described above, used to categorize the subject matter of the sender's activities. The notification setting data 195e define how the web server 110 is to communicate with the sender 155. Those skilled in the art will recognize that the parameters defined above in the sender profile 195 are mutually exclusive and may be employed in any combination.

EX1005 at 5:19-36 (emphasis added).

215. The only specific “messenger profile data” that this limitation requires to be received and stored is “messenger identifying data.” A POSA would understand that the “unique identifier” ID field 195a would satisfy the “messenger identifying data” limitation. In addition, a POSA would understand that each of the fields 195b (“e-mail address”), 195c (“physical address”), and 195d (“a series of

SIC numbers 195d describing the sender”) also constitute “messenger identifying data”, since each field identifies the sender or messenger in its own way.

216. A POSA would also understand that since the “senders 155 may establish their respective sender profiles 195 with the web server 110” (*Id.* at 5:49-51), storing these profiles constituting messenger data at the web server would constitute storing them in a “database” associated with that web server (according to my discussion of “database” in Section VI.A). *See also id.* at 5:45-55, 4:17-23, Fig. 4; EX1007 at 3:46-47 (“The sender profile 200 may be stored in the data center 110 in a sender profiles database 112”), 4:21-22 (“The recipient profile 300 may be stored in the data center 110 in a recipient profiles database”).

217. Since sender profiles, recipient preference profiles, and messages are each distinct kinds of data in Law586, a POSA would understand that when Law586 stores its sender profile constituting messenger data, it would store the data in what would reasonably be described as a “messenger profile database” (again, according to my discussion of “database” in Section VI.A) . Since the messenger profile database is part of a system relating to message management and providing access to data other than messenger profile data, the POSA would also understand that the messenger profile database is part of the system’s broader message management database.

218. Likewise, I again note, as with 1[b], that the disclosure of a messenger profile application is further confirmed by Law586's disclosure that a POSA "will recognize that the use of *appropriate menu and/or command driven web pages* that allow the recipient and sender to log on to and provide the sought[-]after information described above may be accomplished *in any conventional manner*." EX1005 at 5:46-55 (emphasis added); *see also* 3:33-47 ("In conventional fashion, the web server 110 may be any computer system" such as "hardware," "operating system," "*Web server application software*" and "Web site content or pages" "that provides World Wide Web services on the Internet," or "*any suitable combination* of hardware and software (control system) to facilitate the storage, accessing, and processing of information and various communications that are required as described in greater detail below.") (emphasis added).

219. It is also confirmed by the Law773 portion of Law586 which discloses the conventionality of "an application software program executed by the data center 110 control system" to "access[] [using] any suitable technique" the "recipient preferences profiles 190." EX1006 at 4:43-47. This would likewise be applicable to access the similar messenger profiles as discussed above.

220. In my opinion, the combination of Law586 and Joshi also discloses and renders obvious limitation 1[c].

221. In the Law586/Joshi combination, the code that allows messengers to view and control sender profile data is present at least on the web server 110 that includes both Exchange and OWA. A POSA would understand that the code implementing this functionality corresponds to the messenger profile application.

222. In the Law586/Joshi combination, a POSA would understand that SIC (standard industry code) numbers and other data within the sender profile that Law586 teaches is “established by the sender” (EX1005 at 6:9-33) using web sites would be provided by the sender using, *e.g.*, Messenger Profile Exchange Forms. As I explain in Section IX.A.4, Exchange Forms are well suited to gathering information from Exchange users, including message senders. For example, a POSA would implement Law586 by building an Exchange Form allowing a sender to specify SIC numbers and other profile data. A POSA would understand that the code implementing this functionality—either the OWA code, the Exchange code, or both in combination—satisfies the “messenger profile application” limitation.

223. Since sender profiles, recipient preference profiles, and messages are each distinct kinds of data in Law586/Joshi, a POSA would understand that when Law586/Joshi stores its sender profile constituting messenger data, it would store the data in what would reasonably be described as a “messenger profile database”. *See* Section VI.A and its discussion of “database”. Since the messenger profile database is part of a system relating to message management and providing access

to data other than messenger profile data, the POSA would also understand that the messenger profile database is part of the system's broader message management database.

224. Since Law586/Joshi receives messenger profile data at the web server 110 including the Exchange server and OWA server, a POSA would understand that it receives it via "the global network" that is the Internet.

1[d] "a message input application for receiving message files from a messenger via the global network and storing the message files in the database, and"

225. In my opinion, Law586 discloses limitation 1[d].

226. This claim part uses the term "database". I incorporate herein my discussion of that term as it is used in the '920 patent from Section VI.A beginning at ¶ 41.

227. Law586 teaches:

Furthermore, to assist in the creation, addressing, output generation and/or delivery of messages, the senders 155 may employ any number and variety of messaging systems (not shown). Examples of messaging systems are: a traditional postage meter, [...] Still other examples of messaging systems are [...], electronic mail and the like. Because messaging systems are well [known], there descriptions have been limited for the sake of brevity to only that which is necessary to provide suitable background for an understanding of the present invention.

EX1005 at 3:61-4:11.

As another example, the web server 110 may operate as the message dispatcher. Thus, the senders 155 provide instructions to the web server 110 that control the messaging process.

Id. at 8:15-18.

228. The Law773 portion of Law586 discloses that:

As another example, the control systems of the data center 110 and the messaging systems 150 may operate cooperatively such that various tasks and operations described above may occur at either location. As yet another example, the data center 110 may operate as the message dispatcher. Thus, the messaging systems 150 generate the messages and upload them to the data center 110. Then, the data center reconciles the messages with the recipient preference profiles 190 and takes appropriate measures when dispatching or not dispatching the messages as discussed above.

EX1006 at 7:47-56.

229. A POSA would understand that, in the above embodiment of Law586, messages are transmitted from sender computers over the Internet to the web server 110 (part of the data center 110) on the way to the ultimate recipient(s). A POSA would understand that the code implementing the functionality that is used at the data center 110 to receive messages intended for their ultimate recipient(s) corresponds to the message input application.

230. A POSA would also understand that when one of the messaging systems acts to “generate the messages and upload them to the data center” for further “dispatching”, these messages would be stored in a “database” associated

with that web server as part of that process (according to my discussion of “database” in Section VI.A) . Such a database is necessarily part of an MTA, since MTAs must be able to detect when messages cannot currently be transmitted due to network quotas, transient errors, and other situations. *See* ¶ 74 in Section IX.A.1. Thus, a POSA understands that an MTA stores messages in transit in a database, at least temporarily, until the message has been successfully dispatched. MTAs may also have further message retention policies requiring longer-term storage.

231. Since sender profiles, recipient preference profiles, and messages are each distinct kinds of data in Law586, a POSA would understand that when Law586 stores messages at the data center, it would store the messages in what would reasonably be described as a “message database” (again, according to my discussion of “database” in Section VI.A). Since the message database is part of a system relating to message management and providing access to data other than messages, the POSA would also understand that the message database is part of the system’s broader message management database.

232. Since Law586 receives message files at the web server 110, a POSA would understand that it receives them via “the global network” that is the Internet.

233. In my opinion, the combination of Law586 and Joshi also discloses and renders obvious limitation 1[d].

234. As I explained in Section X.A, the combination of Law586 with Joshi uses an architecture similar to what I have analyzed above. Namely, after senders transmit messages, the Exchange server and its MTA would apply messaging policy and route the message towards recipients. In the Law586/Joshi combination, that server is part of the web server 110 functionality.

235. As I explain in Sections IX.A.1 and IX.A.5 and incorporate herein by reference, Joshi discloses Exchange/Outlook/OWA code supporting the receipt of messages and forms. Specifically relevant here is the code providing the features for receiving message files from messengers by way of Message Exchange Forms and native “send” and storing the messenger data in the database, as I explained in Section X.A beginning at ¶ 151. A POSA would understand that messages sent in this system would include fields such as “To:”, “Cc:”, and “Subject:”, as these are inherent to the Exchange/Outlook/OWA messaging environment. *See, e.g.*, EX1029 at 717-718, Fig. 31.11.

236. Thus, a POSA would understand that the code implementing the functionality that is used at the web server 110 to receive messages from messengers and intended for their ultimate recipient(s) corresponds to the message input application.

237. A POSA would also understand that when a Law586/Joshi sender sends messages, these messages would be stored in a “database” of Exchange and

the web server 110 as part of that process (as I explained above and according to my discussion of “database” in Section VI.A). Such a database is necessarily part of Exchange, since Exchange must receive and store the message to process and route it further toward its destination, to be able to detect when messages cannot currently be transmitted due to network constraints, transient errors, and similar situations, and to inspect the message and apply installation-specific policy and rules. *See* ¶ 74 in Section IX.A.1 on message flow, Section IX.A.3 on Exchange Rules, and IX.A.4 on Exchange Forms. As I explained in Section X.A beginning at ¶ 151, a POSA would recognize that rules may be expressed within one or more Message Exchange Forms. A POSA would also understand that outbound messages are stored in Exchange folders, typically “Sent Items—For copies of messages you’ve sent”. EX1023 at 914.

238. Since sender profiles, recipient preference profiles, and messages are each distinct kinds of data in Law586/Joshi, a POSA would understand that when Law586/Joshi stores messages in Exchange, it would store the messages in what would reasonably be described as a “message database” (according to my discussion of “database” in Section VI.A). Since the message database is part of a system relating to message management and providing access to data other than messages, the POSA would also understand that the message database is part of the system’s broader message management database.

239. Since Law586/Joshi receives message files at the web server 110 including the Exchange server, a POSA would understand that it receives them via “the global network” that is the Internet.

240. Thus, a POSA would understand that the implementation of Exchange including OWA as used to receive and store information from a menu or web page for collecting message data from a messenger over the Internet to be stored in the database corresponds to the claimed “a message input application for receiving message files from a messenger via the global network and storing the message files in the database.”

1[e] “an individual message generator in communication with the database and operative to access and utilize data and files from the database to generate an individual message to be sent to the recipient specified by the messenger via the global communications network according to the delivery parameters; and”

241. In my opinion, the combination of Law586 and Joshi discloses and renders obvious limitation 1[e].

242. This claim part uses the term “database”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41.

243. As described above in connection with limitation 1[d], Law586 describes a “data center” embodiment in its Law773 portion, in which messages are dispatched from the data center 110 that includes the web server 110. It states

that “the data center reconciles the messages with the recipient preference profiles 190 and takes appropriate measures when dispatching or not dispatching the messages as discussed above.” EX1006 at 7:54-56. The “appropriate measures when dispatching or not dispatching the messages as discussed above” include the following:

The interest data 190d and the no interest data 190e may also be established by the recipients 180 and utilized by the messaging systems 150 to more effectively route messages to the intended recipient 180. Using the interest data 190d, the senders may scan the profiles 190 looking for recipients that are likely to be interested in their messages (solicitations, informational communication, etc.). Thus, the senders would achieve greater effectiveness on their message delivery programs because they would have an indication the certain recipients 180 have a previously acknowledged interest in a particular industry or industries. On the other hand, using the no interest data 190e, the senders may also increase the effectiveness of their message delivery programs while reducing costs. While scanning the profiles 190 in general or accessing profiles 190 for recipients 180 that have already [been] designated to receive a message, the sender may terminate further processing of certain messages by out sorting any recipients 180 that have provided an indication that they are not likely to be interested in any messages (solicitations, information communication, etc.) from a particular industry or industries. In other words, messages intended for such recipients will be terminated (not generated, not dispatched, etc.). This may be achieved automatically by including in the messaging systems 150 an indication of the senders SIC number. Thus, the SIC numbers supplied by the recipients as no interest data may be compared with the SIC numbers assigned to the senders. Thus, the senders would save costs by foregoing to dispatch any messages to these recipients 180.

Additionally, these recipients 180 benefit in that they are not distracted by the receipt of undesired messages.

EX1006 (Law773), 6:33-63; *see also* EX1005 (Law586), 6:9-33.

244. Law586 indicates that the process for sending messages includes determining whether to “dispatch[] a message for delivery to a particular recipient”:

Senders 155 may access the recipient preference profiles 190 to gain better insights into how a particular recipient 180 wishes to be communicated with. Generally, it is anticipated that the senders 155 would access the profiles 190 at any time prior to dispatching a message for delivery to a particular recipient 180. ...

EX1005 at 5:56-62.

While scanning the profiles 190 in general or accessing profiles 190 for recipients 180 that have already [been] designated to receive a message, the sender may terminate further processing of certain messages by out sorting any recipients that have provided an indication that they are not likely to be interested in any messages (solicitations, information communication, etc.) from a particular industry or industries. In other words, messages intended for such recipients will be terminated (not generated, not dispatched, etc.). ...

EX1005 at 6:21-30.

245. Thus, the embodiment described would determine those recipients who “are likely to be interested in their messages” and use the message contents and/or other information from or about the messenger stored at the data center to dispatch messages to the recipients specified by the messenger, which may be for

delivery to a particular recipient and include other specifications such as SIC numbers for the messenger and “interest” and “no interest” SIC codes for the recipients, all of which are stored at the data center. A POSA would therefore understand that “reconcil[ing] the messages with the recipient profiles 190 and tak[ing] appropriate measures when dispatching or not dispatching” satisfies the limitation of being “in communication with the database” to “access utilize data and files from the database to generate an individual message to be sent to the recipient specified by the messenger via the global communications network according to the delivery parameters.” A POSA would further understand that these actions are performed by “an individual generator in communication with the database and operative to” generate such messages, namely, the data center code that performs these steps.

246. In the Law586/Joshi combination, a POSA would similarly understand that code running on the Exchange server combines the messages from the messengers with information extracted from the database, such as the Messenger Profile Exchange Form and the Recipient Profile Exchange Forms including any established Exchange Rules, to determine exactly what messages and content to dispatch to which final addresses. For example, as I discussed above, Law586 discloses that web server 110 operates as a “message dispatcher” according to various “instructions” provided by the messaging system and the

Law773 portion discloses that, when data center 110 is operating as the message dispatcher (as in Law586 and its web server 110), “the data center reconciles the messages with the recipient preference profiles 190 and takes appropriate measures when dispatching or not dispatching the messages as discussed above”. *See also* EX1006 at 7:47-56, 3:17-63, Fig. 1.

247. Where Law586 and Law773 teach this alternative embodiment where messages are sent from the web server, Joshi provides further detail as to how this would work. Specifically, a POSA would understand that the “reconciliation” in Law586 (and the Law773 portion) would be done by code running on the Exchange server, including the Message Transfer Agent (MTA) of Joshi for the routing of email. EX1029 at 52.

248. As Joshi explains, the MTA “provides the engine for routing and transferring data to other servers” and that “[t]he routing process commences when an Exchange Server’s MTA receives a message.” EX1029 at 53. The MTA then compares the recipient’s address to the local site, if the sites do not match, “MTA will match the recipient’s address space to an available connector or gateway.” EX1029 at 53.

249. The MTA “communicates with all other Exchange components,” including the Information Store, which “submits messages for delivery,” and a Directory Service, which the MTA uses to “look[] up addresses and configuration

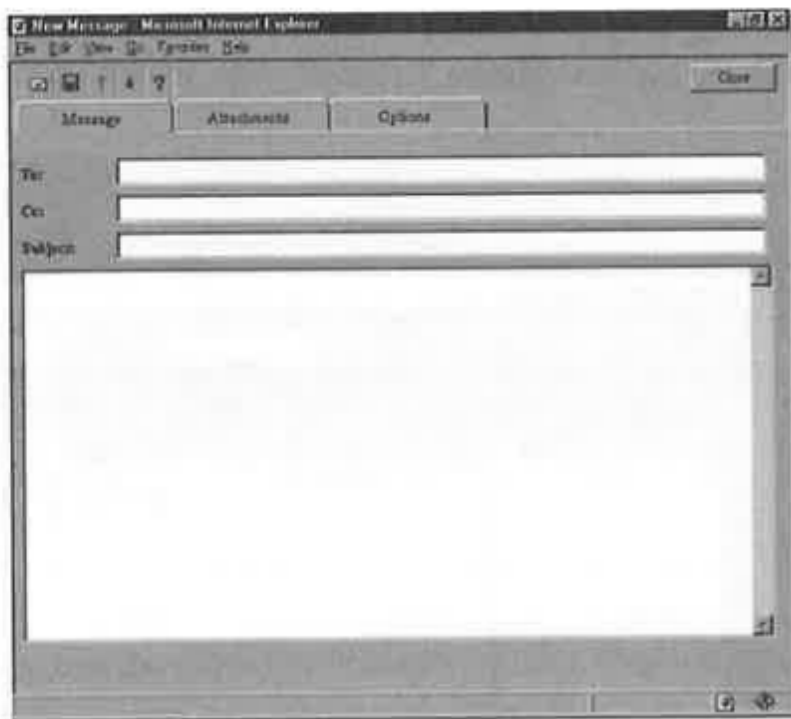
information.” EX1029 at 67-69. Of note, as evidenced by Joshi, a POSA would also understand that the MTA contacts the database.

- *Information Store*—The back-end database that contains all messages and data located on the Microsoft Windows NT server that houses the Exchange server.

EX1029 at 18; *see also* Section IX.A.1.

250. A POSA would further understand that this would include messages that a sender wishes to send to a specified recipient, given in a “To:” or “Cc:” field as described in connection with limitation 1[d] above. *See also* EX1029 at 717, Fig. 31.11 (below).

FIG. 31.11
New Message form.

A screenshot of a web browser window titled "New Message - Microsoft Internet Explorer". The window contains a form with three tabs: "Message", "Attachments", and "Options". The "Message" tab is active. Below the tabs are three input fields labeled "To:", "Cc:", and "Subject:". Below these fields is a large, empty text area for the message body. The browser's address bar and menu bar are visible at the top.

251. A POSA would understand that, in the combined Law586/Joshi system, code running on the Exchange server including the MTA would

correspond to the claimed “individual message generator,” including because: (i) this code is “in communication with the database,” *see* EX1029 at 68 (“The [Information Store] contacts the MTA to ... deliver new outgoing mail.”); (ii) this code is “operative to access and utilize data and files from the database,” including both message files and profile data, *see id.*; *see also* 18 (“Information Store [is the] back-end database that contains all the messages and data located on the Microsoft Windows NT server that houses the Exchange server.”), 69 (“The MTA looks up addresses and configuration...”); (iii) this code then “generates an individual message,” *see id.* at 67 (“In addition to being the transport vehicle for messaging information, [the MTA] also maps and [routes] addresses, and performs some message format conversion to other system’s standards.”); (iv) the generated message is “to be sent to the recipient specified by the messenger specified by the messenger via the global communications network,” *e.g.*, by using the “To:” or “Cc:” field, *see id.* at 717-718, Fig. 31.11; and (v) in the combined system, this code would, in addition to the configuration data disclosed by Joshi, also use “the delivery parameters,” EX1006 at 7:47-56 (“[T]he data center reconciles the messages with the recipient preference profiles 190 and takes appropriate measures when dispatching or not dispatching the messages as discussed above.”).

252. I note that this is consistent with the ’920 Patent’s description of “individual message generator” as something that “combines” messages with

preferences. For example, the patent describes that a messenger inputs a message or uploads a message file to the system for storage in a database and that an “individual message generator 54 obtains information from the database 57 and generates an individual message[] for each recipient, based on the combination of recipient and messenger profile parameters and messages entered into the profile 56 and message 57 databases.” EX1001 at 6:63-67, 8:30-48, 11:2-6, Figures 2, 4.

253. Continuing the example of ¶ 157 as an illustration of the above, when a messenger identified as Acme Auto Rentals with Standard Industry Code (SIC) 2100 submits a message on June 12 addressed to me, David Martin, the Law586/Joshi system server would reconcile the message with my Law586/Joshi recipient profile and determine I had set up a rule that messages e-mailed to me between June 10-18 from Standard Industry Code (SIC) 2100 should be directed to the Exchange address DMARTIN. In addition, it would encounter a rule stating that messages during that same time period from the specific sender Acme Auto Rentals should be directed via fax to the telephone number (515) 292 1212. Thus, the system would apply these preferences and ultimately direct the message to the fax number.

1[f] “a message management server operating system; and”

254. In my opinion, both Law586 alone and the combination of Law586 with Joshi disclose and render obvious limitation 1[f].

255. A POSA would understand that the operating system of the web server, used for message management, is a message management operating system. Of note, Law586 discloses that web server 110 may include an “operating system” “[i]n conventional fashion.” EX1005 at 3:33-37. Law586 also discloses that web server 110 “collects message preference data” and “may employ any suitable combination of computer hardware software (control system) to facilitate the storage, access and processing of the [described] information and various communications” such as managing messages from senders and recipient preferences. EX1005 at 3:38-47.

256. In the Law586/Joshi combination, a POSA would recognize that message management operating system as including Windows NT with Exchange Server installed upon it:

Exchange Server is part of the BackOffice Suite of server products that runs on top of the Windows NT operating system. Windows NT is a powerful 32-bit multithreaded, multitasking operating system. The Exchange Server can leverage this functionality by utilizing as many threads or application processes as needed to provide a robust messaging infrastructure.

EX1029 at 88.

257. A POSA would understand that an operating system generically described in Law586, such as the Windows NT operating system specified in Joshi that is part of web server 110 used for message management, corresponds to the

claimed “message management server operating system,” and further that such operating systems were well-known and conventional as evidenced by the disclosures of Law586, Joshi and as I explained in Section IX above regarding the state of the art.

258. I note that the '920 Patent does not identify a particular operating system or characteristics of a message management server operating system. Rather, like the other conventional components, the patent provides only a generic description of well-known, off-the-shelf operating systems such as Microsoft Windows operating systems. EX1001 at 7:1-8. This further confirms that a POSA would understand Law586 alone or in combination Joshi to disclose the claimed operating system in limitation 1[f].

1[g] “the message management database including recipient and messenger profile databases for storing recipient and messenger profile data respectively, and a message database for storing message data files”

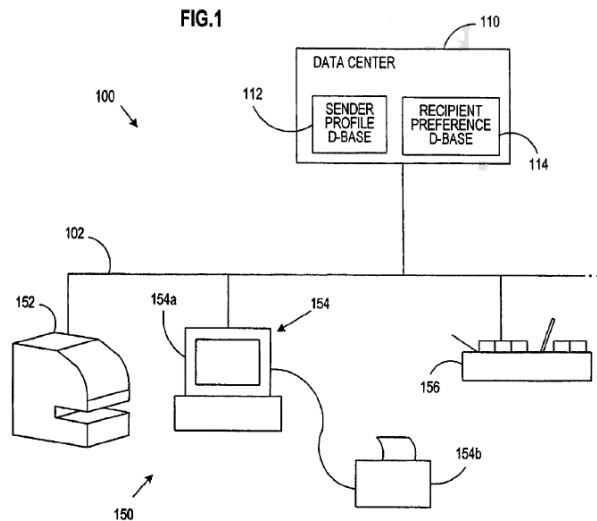
259. In my opinion, Law586 alone as well as the combination of Law586 with Joshi discloses and renders obvious limitation 1[g].

260. This claim part uses the term “database”. I incorporate herein my discussion of that term as it is used in the '920 patent from Section VI.A beginning at ¶ 41.

261. A POSA would understand that, as taught by Joshi, messages would be stored. *See also* Section IX.A.1 (describing Joshi and message storage).

262. As I have discussed, Law586 describes a “database server,” which a POSA would understand to include one or more databases in which the relevant information is stored (such as data about the sender, recipient and messages, as appropriate). EX1005 at 4:17-24. The Law773 portion of Law586 discloses a “recipient preference profiles database” and discloses that “recipient preference profile 190 is preferably stored in any suitable memory device” such as a “database server.” EX1006 at 4:21-41.

263. The Law845 portion of Law586 discloses separate databases for recipient profile information and sender/messenger profile information:



EX1007 at Fig. 1.

264. As shown and described, the Law845 portion discloses that “sender profile 200 may be stored in the data center 110 in a sender profiles database 112”

and that “[t]he recipient profile 300 may be stored in the data center 110 in a recipient profiles database 114.” EX1007 at 3:46-47, 4:21-22.

265. A POSA would understand that this is in part because recipient profiles and sender profiles are logically distinct and independently controllable. A POSA would also have understood that the recipient profiles and sender profiles are different data structures, and consequently would routinely be stored separately for easier and more efficient searching, sorting, recombining, and/or retrieving. EX1020 at 130; EX1021 at 123; EX1011 at 333.

266. Similarly, the messages themselves are logically distinct from both the recipient and sender. A POSA would understand that the message files stored in the system would routinely be stored in a separate database as well—such as in Joshi—as was conventional in the art, such as in an email database, to allow for storage, retrieval and processing. EX1029 at 6, 18, 316; *see also* EX1022 at 3:52-4:27, 6:49-7:63, Fig. 1 (disclosing conventional “email database” that may be an “Oracle7 database” for storing messages and a separate “category database” for storing rules).

267. According to my discussion of “database” in Section VI.A, a POSA would understand that the recipient profile database, the messenger profile database, and the message database considered together form the message

management database. Although the constituent member databases are distinct, they are used in concert for message management.

268. In the Law586/Joshi combination, the same reasoning applies. A POSA would recognize that the recipient profile database, the sender/messenger profile database, and the message database are distinct. The message management database is on the Exchange server and simply consists of the recipient profile database, the messenger profile database, and the message database. Although the constituent member databases are distinct, they are used in concert for message management.

2. Claim 2

“The electronic message management system of claim 1, wherein the recipient profile application includes a global network interactive recipient profile input form, the recipient profile input form being accessible to a recipient computer via the global digital communications network.”

269. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 2.

270. I explained in my analysis of claim 1[b] how Law586 and Joshi disclose the claimed recipient profile application.

271. Conventional web pages, as disclosed in Law586 and described above, would include input forms. This is consistent with the '920 Patent's generic disclosure of a web page. EX1001 at 6:33-40; *see also* 5:46-48.

272. Law586 discloses that web server 110 receives profile information from recipient computers 180 over the Internet using “appropriate menu and/or command driven web pages that allow the recipient and sender to log on to and provide the sought[-]after information described above may be accomplished in any conventional manner.” EX1005 at 5:46-55. Figure 1 of Law586 depicts that recipients access the web server (and therefore its corresponding web pages) via the Internet.

273. A POSA would understand that such well-known Internet-based menus or command-driven web pages for inputting recipient profile data includes or constitutes a “global network interactive recipient profile input form” included in “the recipient profile application,” as conventional menus/web pages conventionally included a form with fields whereby a user interacts with the web pages by inputting the relevant information.

274. I further discussed in Sections IX.A.4 and IX.D above the well-known and conventional interactive input forms which allow input from users, whether those users are senders, recipients, or others. A POSA would understand that the user interface corresponding to the recipient profile application would be implemented using one or more of these types of forms.

275. In Section X.A, I described the result of the Law586/Joshi combination, including its use of Recipient Profile Exchange Forms provided

either natively to a client such as Outlook, or in web page form via OWA. I provided explanation of how such forms work in Sections IX.A.4, IX.A.5, and IX.D. I explained further in my analysis of claim 1[b] that the recipient profile application is for receiving recipient profile data, *e.g.*, as Recipient Profile Exchange Forms. A POSA would recognize that this recipient profile application therefore includes a global network interactive recipient profile input form that is accessible to a recipient computer via the global digital communications network, where the global network and the global digital communications network are both the Internet.

3. Claim 3

“The electronic message management system of claim 1, wherein the messenger profile application includes a global network interactive messenger profile input form, the messenger profile input form being accessible to a messenger computer via the global digital communications network.”

276. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 3.

277. I explained in my analysis of claim 1[c] how Law586 and Joshi disclose the claimed messenger profile application.

278. Conventional web pages, as disclosed in Law586 and described above, would include input forms. This is consistent with the '920 Patent's generic disclosure of a web page. EX1001 at 6:33-40; *see also* 5:46-48.

279. Law586 discloses that “senders 155 may establish their respective sender profiles 195 with the web server 110 during a communication session in any conventional manner.” EX1005 at 5:49-52. Figure 1 of Law586 depicts that senders access the web server (and therefore its corresponding web pages) via the Internet.

280. A POSA would understand that such well-known Internet-based menus or command-driven web pages for inputting sender profile data includes or constitutes a “global network interactive recipient profile input form” included in “the sender profile application,” as conventional menus/web pages conventionally included a form with fields whereby a user interacts with the web pages by inputting the relevant information.

281. I further discussed in Sections IX.A.4 and IX.D above the well-known and conventional interactive input forms which allow input from users, whether those users are senders, recipients, or others. A POSA would understand that the user interface corresponding to the messenger profile application would be implemented using one or more of these types of forms.

282. In Section X.A, I described the result of the Law586/Joshi combination, including its use of Messenger Profile Exchange Forms provided either natively to a client such as Outlook, or in web page form via OWA. I provided explanation of how such forms work in Sections IX.A.4, IX.A.5, and

IX.D. I explained further in my analysis of claim 1[c] that the messenger profile application is for receiving messenger profile data, *e.g.*, as Messenger Profile Exchange Forms. A POSA would recognize that this messenger profile application therefore includes a global network interactive messenger profile input form that is accessible to a messenger computer via the global digital communications network, where the global network and the global digital communications network are both the Internet.

4. Claim 4

“The electronic message management system of claim 1, wherein the message input application includes an interactive global network message input form, the message input form being accessible to a messenger computer via the global communications network.”

283. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 4.

284. I explained in my analysis of claim 1[d] how Law586 and Joshi disclose the claimed message input application.

285. Conventional web pages, as disclosed in Law586 and described above, would include input forms. This is consistent with the '920 Patent's generic disclosure of a web page. EX1001 at 6:33-40; *see also* 5:46-48.

286. The Law773 portion of Law586 discloses that “the messaging systems 150 generate the messages and upload them to the data center 110.” EX1006 at

7:52-54. A POSA would understand this uploading takes place over the Internet, as I explain in my analysis of claim 1[d].

287. A POSA would understand that such well-known Internet-based menus or command-driven web pages for inputting messages includes or constitutes a “global network interactive message input form” included in “the message input application,” as conventional menus/web pages conventionally included a form with fields whereby a user interacts with the web pages by inputting the relevant information.

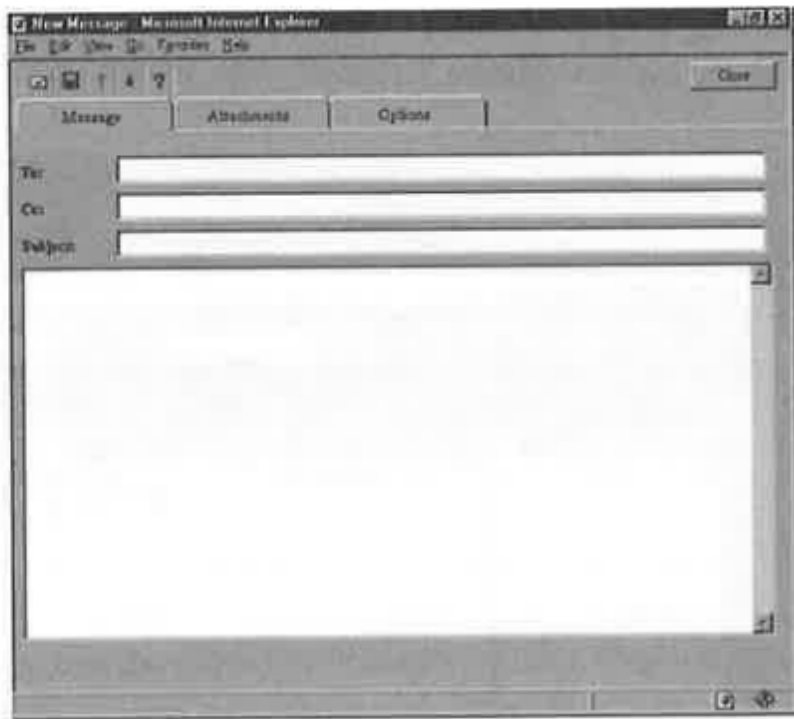
288. I further discussed in Sections IX.A.4 and IX.D above the well-known and conventional interactive input forms which allow input from users, whether those users are senders, recipients, or others. A POSA would understand that the user interface corresponding to the message input application would be implemented using one or more of these types of forms.

289. In Section X.A, I described the result of the Law586/Joshi combination, including its use of Message Exchange Forms for uploading messages, provided either natively to a client such as Outlook, or in web page form via OWA. I provided explanation of how such forms work in Sections IX.A.4, IX.A.5, and IX.D. I explained further in my analysis of claim 1[d] that the message input application is for receiving messages, *e.g.*, as Message Exchange Forms. A POSA would recognize that this message input application therefore includes a

global network interactive message input form that is accessible to a messenger computer via the global digital communications network, where the global network and the global digital communications network are both the Internet.

290. As I explained in Section IX.A.5, a POSA would recognize that OWA includes an interactive message input form, specifically “a New Message form” accessible to a messenger computer (as in Figure 31.11 below).

FIG. 31.11
New Message form.



EX1029 at 718.

5. Claim 5

“The electronic message management system of claim 1, wherein the recipient profile application further comprises a network interface and a recipient profile editor for receiving recipient profile data from a recipient computer via the global network

interface and for manipulating the recipient profile database to store the recipient profile data.”

291. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 5.

292. The claim language here simply adds the requirement that the application of this claim has access to a network interface and receives the claimed recipient profile data via this interface.¹¹ The claim further identifies the portion of the application that receives the recipient profile data via the interface as the “recipient profile editor” and describes its storage of the recipient profile data in the database as “manipulating” the database.

293. Ordinarily, “a network interface” refers to a piece of hardware, as it does in the ’920 Patent itself:

[A] network interface can be practiced using any of a number of devices known to the ordinary skilled artisan, such as an analog modem, a ISDN modem, a cable modem, a satellite transmission interface (e.g., “Direct PC), or another interface for coupling one computer system to other computer systems. Client computer systems 40-43 are coupled to LAN buses 33 and 34 through network interfaces 35-38, which can be Ethernet network or other network interfaces. The LAN buses 33,

¹¹ I note that claim 5 refers to “the global network interface” but does not appear to define that term. Instead, it states that “the recipient profile application further comprises a network interface...” I regard this as a typographical error with the understanding that “the global network interface” refers to “a network interface” in this instance. While claims 6 and 7 are similar in form to claim 5, they consistently refer to a “global network interface”.

34 are also coupled to gateway computer systems 31, 32, which can provide firewall and other Internet related services for the LANs 33, 34.

EX1001 at 5:65-6:10.

294. However, given the requirement of this claim language (and the claim language of claims 6 and 7 below) that an “*application* comprises a network interface,” a POSA would understand this to express a requirement that the application relies upon the network interface for transmission and/or receipt of information. Generally, a POSA would understand that an application that uses the Internet necessarily does so via such a network interface.

295. As I discussed above for claim 1[b] and claim 2, Law586 and Joshi disclose the claimed “recipient profile application”, which receives profile information from recipients over the Internet via an interactive form and stores the data in the database.

296. Accordingly, a POSA would understand that the software used to take information from multiple client computers via the Internet and store it in a database separate from those client computers comprises “a network interface.” EX1005 at 3:31-34 (“The plurality of recipients 180 and the plurality of senders 155 are in communication with the web server 110 over any suitable communication network (LAN, WAN, telephone line, Internet, etc.) 102.”).

297. A POSA would also understand that, because the manipulation of the database is implemented via a web server as part of “a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database,” the associated software used to update the database comprises the claimed “a recipient profile editor ... for manipulating the recipient profile database to store the recipient profile data.”

6. Claim 6

“The electronic message management system of claim 1, wherein the messenger profile application further comprises a global network interface and a messenger profile editor for receiving messenger profile data from a messenger computer via the global network interface and for manipulating the messenger profile database to store the messenger profile data.”

298. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 6.

299. Similar to claim 5, the claim language here simply adds the requirement that the application of this claim has access to a network interface and receives the claimed messenger profile data via this interface. The claim further identifies the portion of the application that receives the messenger profile data via the interface as the “messenger profile editor” and describes its storage of the messenger profile data in the database as “manipulating” the database.

300. As I discussed above for claim 1[b] and claim 3, Law586 and Joshi disclose the claimed “messenger profile application”, which receives profile

information from messenger over the Internet via an interactive form and stores the data in the database.

301. As I discussed for claim 5, a POSA would understand that the software used to take information from multiple client computers via the Internet and store it in a database separate from those client computers includes “a network interface.” EX1005 at 3:31-34.

302. Similar to my discussion in claim 5, a POSA would understand that, because the manipulation of the database is implemented via a web server as part of “a messenger profile application for receiving messenger profile data from messengers via the global network and storing the messenger data in the database,” the associated software used to update the database comprises the claimed “a messenger profile editor ... for manipulating the messenger profile database to store the messenger profile data.”

7. Claim 7

“The electronic message management system of claim 1, wherein the message input application further comprises a global network interface and a message data file editor for receiving a message file data from a messenger computer via the global network interface and for manipulating the message database to store the message data file.”

303. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 7.

304. Similar to claim 5, the claim language here simply adds the requirement that the application of this claim has access to a network interface and receives the claimed message file data via this interface. The claim further identifies the portion of the application that receives the message file data via the interface as the “messenger data file editor” and describes its storage of the message file data¹² in the database as “manipulating” the database.

305. As I discussed above for claim 1[d] and claim 4, Law586 and Joshi disclose the claimed “message input application”, which receives message files from messengers over the Internet via an interactive form and stores the message files in the database.

306. As I discussed for claim 5, a POSA would understand that the software used to take information from multiple client computers via the Internet and store it in a database separate from those client computers includes “a network interface.” EX1005 at 3:31-34.

307. Similar to my discussion in claim 5, a POSA would understand that, because the manipulation of the database is implemented via a web server as part of “a message input application for receiving message files from a messenger via

¹² While claim 7 recites “a message file data” and then “the message data file”, a POSA would understand these as referring to the same entity, both being “message files” and “message data files” of claim 1.

the global network and storing the message files in the database,” the associated software used to update the database comprises the claimed “a message data file editor ... for manipulating the message database to store the message data file.”

8. Claim 8

8[pre] “A method of inputting data into the message management system of claim 1 from client computers via a global communications network, to centrally manage the distribution and delivery format of electronic messages from multiple messenger sources to multiple individual recipients, comprising the steps of:”

308. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 8 for the same reasons discussed in connection with claim 1.

309. Regardless of whether the preamble is limiting, the combination of Law586 and Joshi discloses and renders obvious the claimed “method ...”

310. As I discussed above in claim 1 and further below, Law586 and Joshi disclose or render obvious the limitations of claim 1 and include client computers (recipient and messenger computers), a global communication network (Internet), and that the system centrally manages the distribution and delivery format of electronic messages from multiple messenger sources to multiple individual recipients.

311. I provide further analysis below for limitations 8[a] through 8[e].

8[a] “providing the client computers with access to the message management system via a global communications network, where the client computers are messenger and recipient computers;”

312. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 8[a] as discussed in connection with claim 1.

313. As in Figure 1 of Law586 and discussed in claim 1 above, Law586 discloses providing sender computers 155 and recipient computers 180 with access to web server 110 and its associated database over Internet 102, such that sender and recipient computers communicate with the web server. EX1005 at Abstract, 3:27-4:24, 5:45-54, Figures 1, 4.

8[b] “receiving a connectivity request from a client computer for access to the message management system to input data;”

8[c] “connecting the client computer to the message management system via the global communication network”

314. I discuss limitations 8[b] and 8[c] together. These limitations are directed towards the simple process of establishing a network connection between a client and a server.

315. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claims 8[b] and 8[c].

316. For example, Law586 discloses: (a) recipient computers 180 and sender computers 155 “connect to the web server 110 using any conventional type of computer based communication system” over Internet 102; (b) recipient and sender computers “log on” to the system in order to access and then “provide the

sought[-]after information,” and (c) after logging-in, access to the system over the Internet. EX1005 at 3:27-57, 5:45-55, Fig. 1.

317. A POSA would understand that this discloses “a connectivity request from a client computer for access to the message management system to input data” and “connecting the client computer to the message management system” which connection occurs “via the global communication network” (Internet).

8[d] “prompting the client computer for the data to be input by providing a data input form to the client computer; and”

318. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 8[d].

319. A POSA would understand that presenting a data input form to a user is a way of prompting for an input.

320. I refer back to my analysis for claims 2-4 and note here that a POSA would understand that Law586 alone or with Joshi provides various “data input forms” in the form of web pages to sender and recipient computers, which includes prompts (such as fields) to enter data as commonly used on conventional web pages. Similarly, when Exchange provides Property Pages or Exchange Forms from an Information Store to a client computer running Outlook and the client computer presents it to a user for completion, this also satisfies the limitation.

8[e] “accepting input data from the client computer and entering the input data into an electronic message management database of the message management system.”

321. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 8[e] for the same reasons as claims 2-4.

322. I refer back to my analysis for claim 1, limitations 1[a] through 1[d] and note here that a POSA would understand that Law586 and Joshi disclose that sender profiles, recipient profiles, and messages (*i.e.*, “the input data”) from senders and recipients (*i.e.*, clients) are stored in the database of the message management system, and thus they must be accepted by the appropriate server application to be entered (*i.e.*, “stored”) in the database.

9. Claim 9

“The method of claim 8, wherein the prompting step includes providing an input form to the client computer.”

323. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 9.

324. The input forms of this claim are those within Law586 and Joshi web pages and Exchange Property Pages and Exchange Forms. In Law586 and Joshi, these are provided to the client computer (again as in claims 2-4 and 8[d], which analysis I refer back to).

10. Claim 10

“The method of claim 8, wherein the prompting step includes providing an input form to the client computer, the input form

being at least one input form selected from the group consisting of a recipient profile form, a messenger profile form, and a message input form.”

325. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 10.

326. I refer back to my analysis for claim 2-4, 8[d], and 9 and note here that a POSA would understand that the system of Law586 provides various “input forms,” in the form of menus/web pages, including a “recipient profile form,” “messenger profile form,” and “message input form.”

11. Claim 11

“The method of claim 8, wherein the accepting step includes entering the input data into an electronic message management database comprising a recipient profile database, a messenger profile database, and a message database.”

327. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 11 for the same reasons as claims 1 and 8. In my analysis of those claims, I explained how input data is accepted and entered (“stored”) in the database and that the electronic message management database comprises a recipient profile database, a messenger profile database, and a message database.

12. Claim 14

“The electronic message management system of claim 1, wherein the individual message generator communicates with the database to identify messages and messenger parameters that are

compatible with a recipient profile, and to configure the messages for delivery to the recipient.”

328. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 14.

329. As I described above for limitation 1[e], in the combined system of Law586 and Joshi, the individual message generator “communicates with the database to identify messages and messenger parameters that are compatible with a recipient profile.” For example, and as I referred to in limitation 1[e], Law586 discloses that “Using the interest data 190d, the senders may scan the profiles 190 looking for recipients that are likely to be interested in their messages (solicitations, informational communication, etc.).” EX1029 at 6:12-15. The message generator also combines a message with the parameters set by a recipient that are stored in the database (“communicates with the database ... to configure the messages for delivery to the recipient”).

330. A POSA would understand that Exchange also “identif[ies] message and messenger parameters that are compatible with a recipient profile” after having applied recipient preference policy per Law586/Joshi and having obtained specific recipient addresses and having directed these addressed messages to the Exchange MTA for delivery. EX1029 at 67-69. The compatible parameters are identified when the MTA “match[es] the recipient’s address space to an available connector or gateway.” EX1029 at 53. A POSA would understand that the “address space”

would correspond to the claimed “messenger parameters” (*i.e.*, the recipient address specified by the messenger), and the connector or gateway it is matched would be determined by addresses in the recipient profile.

13. Claim 15

“The electronic message management system of claim 1, wherein the individual message generator generates and sends the individual message via a means selected from the group consisting of[:] electronic mail, voice telephone, facsimile transmission, and digital transmission.”

331. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 15.

332. Law586 discloses the limitation of claim 15 (including sending the message via “electronic mail,” “facsimile transmission,” and “voice mail”).

EX1005 at 4:3-10, 4:33-37. Furthermore, these communication means also include “digital transmission”.

14. Claim 16

“The electronic message management system of claim 1, wherein the individual message generator generates the individual message and sends the individual message via a means selected from the group consisting of an electronic means and a hardcopy means.”

333. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 16.

334. Law586 discloses the limitation of claim 16 (including sending the message via “electronic mail”, “voice mail”, “facsimile transmission”, and

“physical mail”). EX1005 at 4:3-10, 4:33-37. See also the analysis of Claim 18 below regarding “hardcopy means”.

15. Claim 17

“The electronic message generator system of claim 16, wherein the individual message generator generates the individual message and sends the individual message via an electronic means selected from the group consisting of electronic mail, voice telephone, facsimile transmission, digital transmission, computer network, voice mail, SMS, telex, and wireless transmission.”

335. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 17.

336. Law586 discloses the limitation of claim 17 (including sending the message via “electronic mail,” “facsimile transmission,” and “voice mail”). EX1005 at 4:3-10, 4:33-37.

16. Claim 18

“The electronic message generator system of claim 16, wherein the individual message generator generates the individual message and sends the individual message via a hardcopy means selected from the group consisting of paper media, magnetic media, and optical media.”

337. In my opinion, the combination of Law586 and Joshi discloses and renders obvious claim 18.

338. Law586 makes explicit reference to hardcopy paper media. For example:

In analogous fashion, the senders 155 may be geographically dispersed and connect to the web server

110 using any conventional type of computer based communication system. Furthermore, to assist in the creation, addressing, output generation and/or delivery of messages, the senders 155 may employ any number and variety of messaging systems (not shown). Examples of messaging systems are: a traditional postage meter, such as the Personal PostTM meter; an open system postage meter, such as the ClickStampTM online postage system employing a personal computer and a dot matrix (laser, inkjet, thermal transfer, etc.) printer; and an inserter system, such as the 8 SeriesTM inserting system; all available from Pitney Bowes of Stamford, Conn. Still other examples of messaging systems are shipping and logistics systems, addressing systems, such as the Address RightTM system available from Pitney Bowes of Stamford, Conn., electronic mail and the like. Because messaging systems are well [known, their] descriptions have been limited for the sake of brevity to only that which is necessary to provide suitable background for an understanding of the present invention.

EX1005, 3:58-4:11.

339. Law586 also refers to “physical” mail and addresses. EX1005 at Fig. 3, 4:33-37, 5:21, 5:29, 6:39-41. *See also* the “snail mail” capabilities of the Greenspun system in Section IX.B.

340. Therefore, a POSA would understand that the individual message generator of the Law586/Joshi combination would generate and send messages via hardcopy means consisting at least of paper media.

**C. SMITH IN VIEW OF PADWICK: BACKGROUND,
MOTIVATION TO COMBINE, AND RESULT OF
COMBINATION**

341. Smith discloses “[a]n automated system for delivery of messages to multiple recipients, and for processing of responses to the messages”. EX1016 at Abstract. Smith names the system a “universal notification or “UN” system. EX1016 at 4:15-19. Smith also uses the term “notification” to refer to the messages enabled by its system. EX1016 at 5:15-18. The layout of the UN system is depicted in Figure 1, below. The UN system includes a UN Client, a UN Server, and a UN database. EX1016 at 2:63-67.

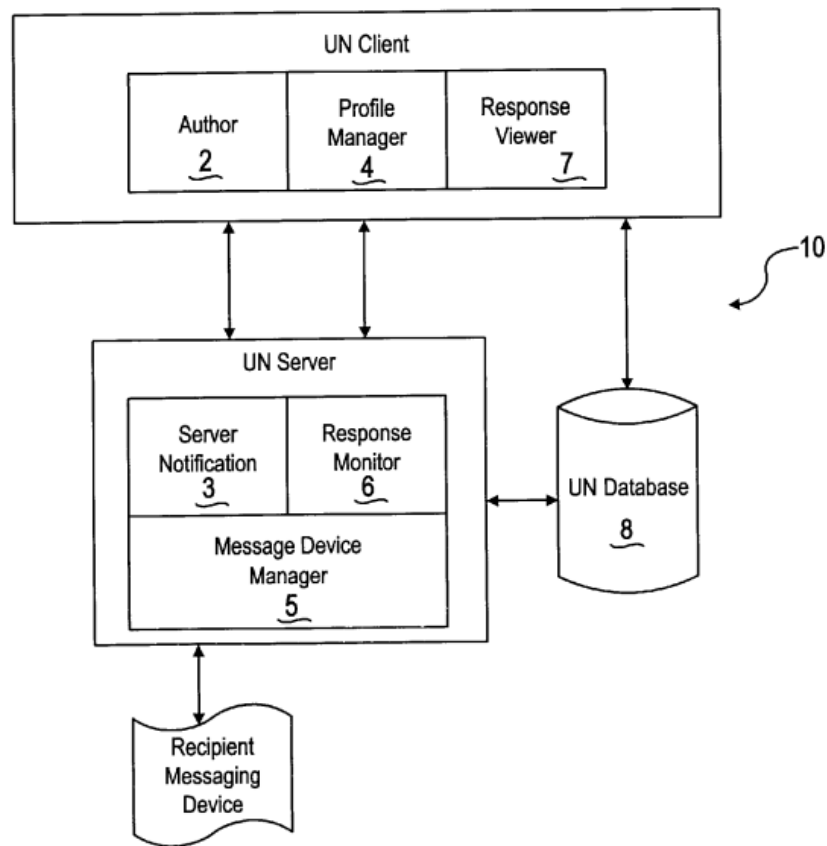


FIG. 1

EX1016 at Fig. 1.¹³

342. As described by Smith:

Looking at FIG. 1, the universal notification and messaging (“UN”) system 10 of the present invention generally includes a UN Client, UN Server, and UN Database 8, each operatively linked to each other and to one or more recipient messaging devices. Preferably, the UN Client combines a conventional computer system with three software modules: a Message Author module 2 for

¹³ While Figure 1 shows a “Message Device Manager 5”, the specification consistently refers to this is as the “Messaging Device Manager”.

initiating messages to recipients, a Profile Manager 4 for managing recipient profiles, and a Response Viewer 7 for viewing responses received from message recipients.

EX1016 at 4:15-24.

343. The “Message Author” module presents message senders with “a blank UN universal message form” in which the user “select[s] from a list of recipients” or “enter[s them] manually” and enters a “message body and attachments.” EX1016 at 5:15-30, Fig. 2 (“Universal Notification form pulled from the UN Server and opened”). The UN Client further allows a sender to select a message priority and security level. EX1016 at 5:25-28.

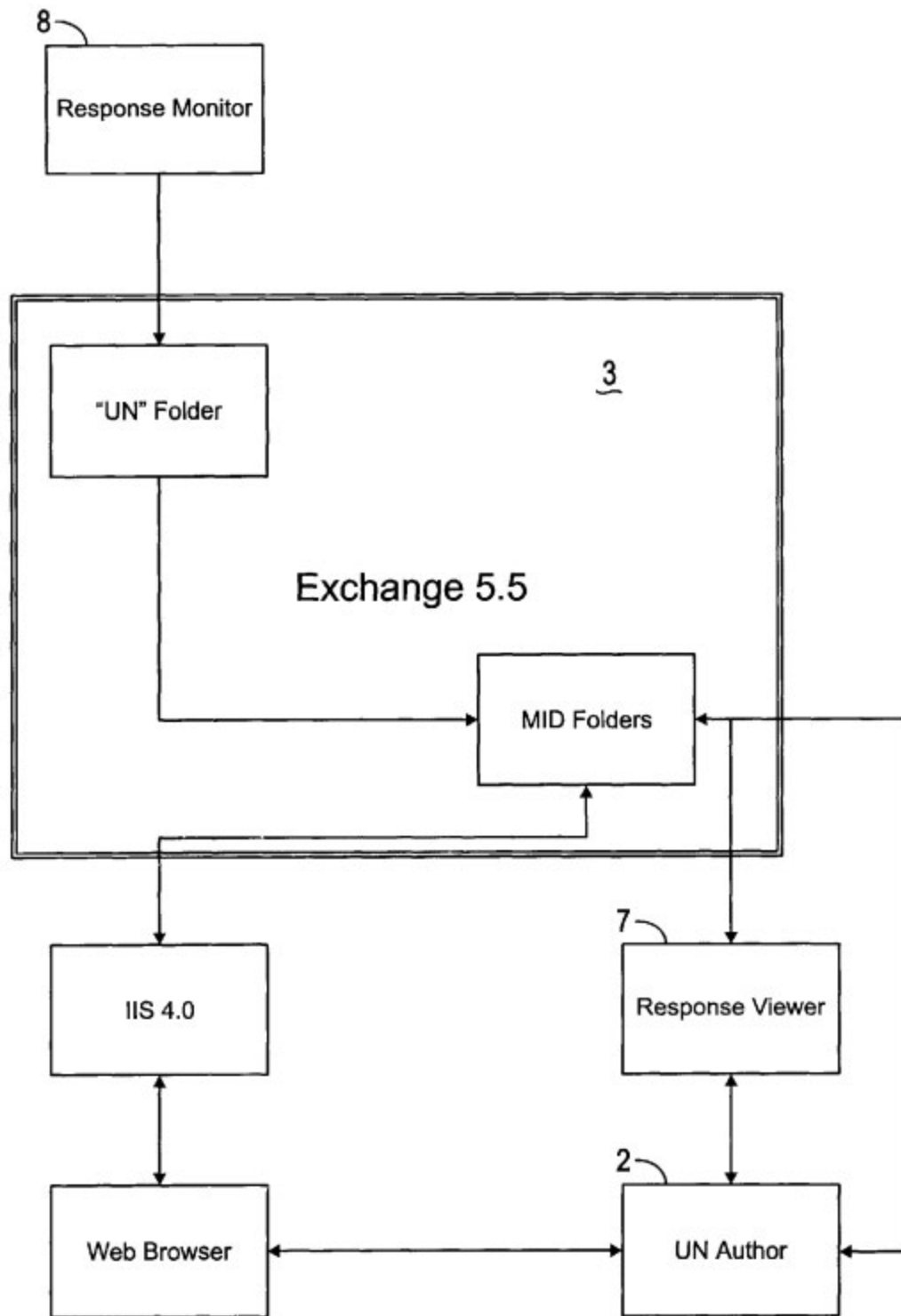
344. The “Profile Manager” module “allows the recipient to choose which devices will be contacted by and at what times and security levels the devices shall be accessed.” EX1016 at 8:65-9:1, Fig. 4. Users can choose devices such as “e-mail, voicemail, fax, pager, telephone and wireless communication devices,” and designate which specific devices “are secure for sensitive or confidential information.” EX1016 at 6:17-19. The user can also designate locations “such as work, home, vacation, travel office” or other user preferences. EX1016 at 6:25-26. This information, referred to as a “profile,” is stored in the UN Database. EX1016 at 6:29-30.

345. The UN System “can be implemented in a variety of messaging environments and computing platforms.” In one embodiment, the UN Client

“would be accessed as a toolbar extension within the Microsoft Office 2000 environment.” EX1016 at 8:8-9, and include “Message Author” and “Profile Manager” software modules. EX1016 at 4:19-24.

346. The UN Server includes the “Messaging Device Manager,” which “converts the message information received from the UN Client into the proper format for receipt and response by a recipient.” EX1016 at 4:47-49. In this embodiment, “[the] UN Server resides on a LAN in conjunction with the Server Notification Module 3 (Exchange 5.5, for example) and UN Database 8 (Microsoft SQL 6.5, for example).” EX1016 at 12:9-12. The UN server further “enables Web based access to Outlook,” in which the system could therefore be accessed using “[a] conventional Internet Web Browser.” EX1016 at 8:59-63. The Internet Information Server module IIS 4.0 (a web server) is depicted in Figure 11, below.

Exchange Interactions



347. As depicted in Fig. 11, the UN Author (part of UN Client, as shown in Fig. 1), accesses the UN system via a Web browser when the system is set up to use Exchange 5.5.

348. Smith describes itself as a system built on top of Microsoft Outlook, and in particular, Outlook 2000. EX1016 at 8:1-33, Figures 10, 14, 16. Smith also discloses use of “custom” settings for recipient profiles. EX1016 at Figures 10, 12, 14. Because the UN system described by Smith explicitly describes using “Microsoft Outlook 2000 as a messaging client and interface,” a POSA, when reviewing the disclosure of Smith, would have also considered the basic Outlook functionality as disclosed in *Using Microsoft Outlook 2000* by Padwick, “the world’s premier author on Microsoft Outlook.” EX1023 at Cover Page.

349. Thus, the Smith/Padwick analysis that follows simply describes the outcome of a POSA implementing the ideas of Smith on a very common messaging platform—the one specifically and repeatedly cited by Smith. In my opinion, the resulting system is a straightforward realization of Smith’s teaching. The Padwick reference simply explicitly states some of the details that were already known to a POSA about the Outlook/Exchange/OWA architecture assumed in the Smith patent.

350. Padwick describes how to use Microsoft Outlook 2000 to set up Outlook “rules”. I explain these features and Padwick’s description of them in

Section IX.A.3. A POSA would be familiar with such rules—both as they apply to incoming messages and to incoming forms. A POSA would associate Smith’s citation to “messaging rules created by the recipients” with this built-in “rules” functionality of Outlook in addition to Smith’s recipient profiles. EX1016 at 12:57-65, 13:6-13, 14:45-52, 14:58-61.

D. SMITH IN VIEW OF PADWICK RENDERS OBVIOUS CLAIMS 1-11 AND 14-17

351. In my opinion, Smith in view of Padwick discloses all of the limitations of claims 1-11 and 14-17, considered as a whole. As explained herein, in my opinion, Smith in view of Padwick renders obvious claims 1-11 and 14-17. I note that the claims are all obvious for the same reasons including those that I present below and in connection with claim 1.

1. Claim 1

1[pre] “An electronic message management system comprising:”

352. Regardless of whether the preamble is limiting, in my opinion, Smith in view of Padwick discloses and renders obvious the claimed “[a]n electronic message management system.” For example, the Abstract of Smith describes it as such:

An automated system for delivery of messages to multiple recipients, and for processing of responses to the messages, includes a message client, message server, and system database. A message is created using a universal message form. The message content can be translated into multiple formats and sent to one or more different

recipients using one or more different types of messaging devices, including pagers, telephones, fax machines, and e-mail readers.

EX1016 at Abstract; *see also* 12:41-45 and Title (“Automated System and Method for Delivery of Messages and Processing of Message Responses”); 2:30-32 (disclosing use with “e-mail, voicemail, fax, pager and telephone communications devices.”).

1[a] “an electronic computer system in operative communication with a global digital communications network, and an electronic message management database in operative communication with the computer system; the electronic computer system having.”

353. In my opinion, Smith in view of Padwick discloses limitation 1[a].

354. The '920 Patent specifically describes the Internet and the World Wide Web (based on the Internet) as examples of a known global digital communications network:

FIG. 1 shows several computer systems 20, 22, 40-43 coupled together through a network 11, such as a LAN, WAN or a global digital communications network, such as the World Wide Web or the Internet. The term “Internet” as used herein refers to a network of networks, which uses certain protocols, such as the TCP/IP protocol, and possibly other protocol such as the hypertext transfer protocol (HTTP) for a hypertext markup language (HTML) documents that make up the World Wide Web. The physical connectivity scheme of the Internet and the communication protocols and procedures of the Internet are well known in the art.

EX1001 at 5:9-20.

355. It is clear from the disclosure of Smith that the UN system, and more specifically the UN Server, is connected to the Internet, which a POSA would understand means that the UN server is “in operative communication with a global digital communications network.” For example, Smith states that, “[t]he UN Server in this embodiment also includes an Internet Information Server module IIS 4.0 (FIG. 11) to enable the use of active Server pages, Web based access to Outlook, etc. A conventional Internet Web Browser is used to access this information.” EX1016 at 8:59-63; *see also* 4:32-35 (“The UN Database 8 can be a conventional mass storage device combined with or linked to a processor and database engine for maintaining required recipient tables, system settings and response fields.”).

356. The “UN Server” includes an “Internet Information Server Module IIS 4.0,” which enables “Web based access to Outlook.” EX1016 at 8:59-63, 4:15-31, Fig. 11. I discuss the use of Outlook Web Access (“Web based access to Outlook”) in Section IX.A.5. The UN Server also includes or is connected to UN Database 8 (such as “a SQL server database”) for storing profile information, and a “Microsoft Exchange Server,” which serves as “a messaging server controlling the flow of messages”. EX1016 at 8:1-9, 8:34-39, 9:1-3, 9:48-52, Fig. 1 (below), Fig. 8 (database design), Fig. 14. Smith explains that “UN Database 8 can be a conventional mass storage device combined with or linked to a processor and database engine for maintaining required recipient tables, system settings and

response fields.” EX1016 at 4:32-35. In addition, a “system database” in Smith may store a variety of information, including “the recipient profiles, messages, and message response information.” EX1016 at 13:13-20, 14:45-52, 15:16-16:5.

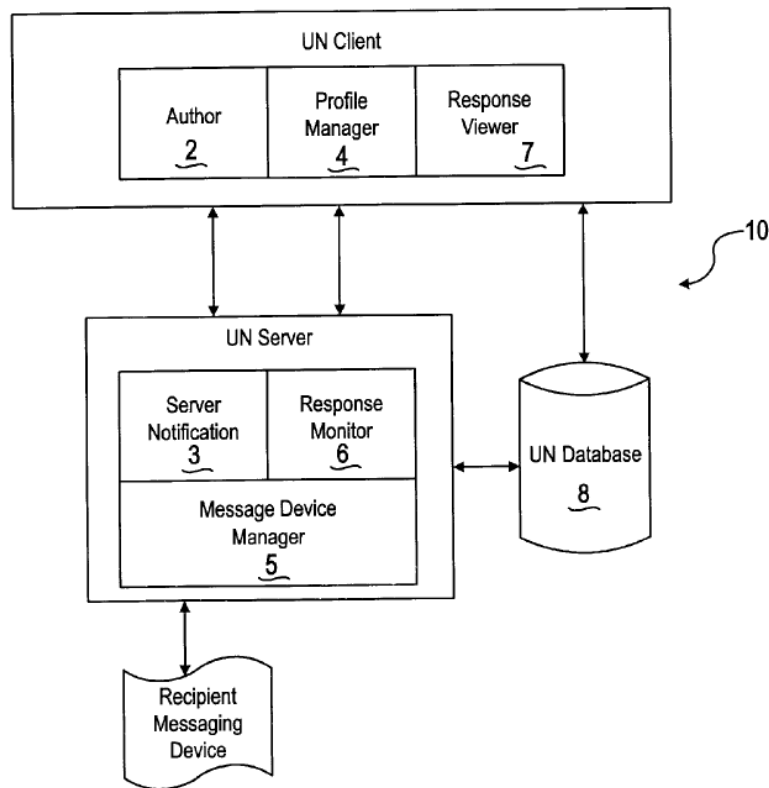


FIG. 1

357. Smith discloses that the UN system is incorporated into the “Microsoft Windows/Outlook/Exchange Server computing environment.” EX1016 at 8:10-14. Smith describes the UN Database of this embodiment as “UN SQL Server Database 8.” See EX1016 at 9:1-3 (“The data for this profile will reside on the UN SQL Server database 8. The recipient profiles can be accessed and

modified either directly or from the Internet web.”). Exchange Server also includes databases, as I explain in Section IX.A.1.

358. In such a configuration, as depicted in Fig. 9, the UN system includes a Database 8 and an Exchange server that would both be part of the UN Server.

“[T]he Database 8 will reside on the same computer that supports the UN Server although it could be located in a separate sub-system. The Database 8 is also the repository of information about the fields for a response and setup information.”

EX1016 at 9:49-52.

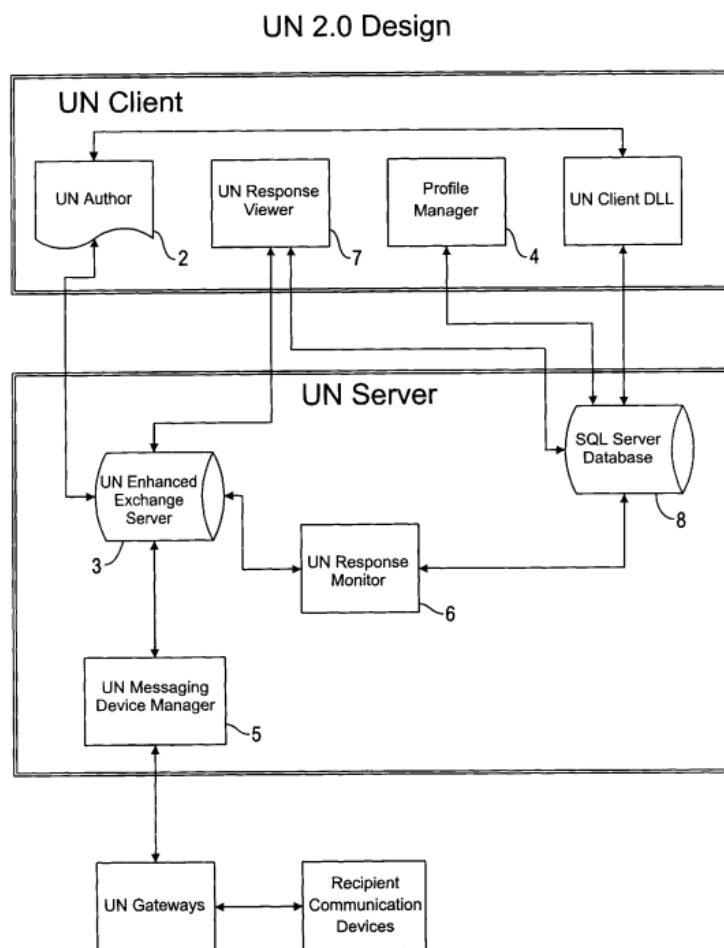


FIG. 9

EX1016 at Fig. 9, 3:30-33 (“FIG. 9 is a block diagram representation of the system of FIGS. 1-8, as implemented in a Microsoft Windows/ Outlook/Exchange Server computing platform.”).

359. This claim part uses the term “database”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41.

360. A POSA would understand that the hardware and software computer systems of the UN server correspond to the claimed “electronic computer system” in the ’920 Patent. A POSA would have further understood that the connected databases (such as UN Database 8 and Exchange Server) used to store messages and profiles constitutes or includes the claimed “electronic message management database in operative communication with the computer system.”

361. This is in line with the disclosure of the ’920 Patent itself, which refers to the computer system of a server and its database separately. *See* EX1001 at 6:20-23 (“[T]he message management server 50 is at least in [part] comprised of the server computer system 15 and database 16 of FIG. 1.”).

1[b] “a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database, the profile data including delivery parameters specified by a recipient of where, when and how

specific types of messages from specific messengers are delivered to the recipient.”

362. In my opinion, Smith in view of Padwick discloses claim 1[b]. I discuss this limitation 1[b] in multiple sections below.

1[b] “a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database...”

363. This claim part uses the term “database”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41.

364. Smith in view of Padwick teaches that part of its UN Client is a “profile manager” that “[a]llows the user to Create or Modify Devices, Profiles and Schedules to determine how h/she will be contacted at any given time.” EX1016 at Fig. 10.

365. The UN Client “would be accessed as a toolbar extension in the Microsoft Outlook 2000 environment.” EX1016 at 8:6-10. Smith further discloses that access to Microsoft Outlook can be “Web based” with a “conventional Internet Web Browser used to access this information.” EX1016 at 8:59-63. The UN Client includes a “profile manager” module that “provides the recipient with tools to define their preferred method, time, priority and security of message delivery, and stores this information in a client profile.” EX1016 at 4:40-44; 8:65-9:3 (“This module allows the recipient to choose which devices he/she will be contacted by

and at what times and security levels these devices shall be accessed. The data for this profile will reside on the UN SQL Server database 8. The recipient profiles can be accessed and modified directly or from the Internet web.”); 9:48-50 (“The UN SQL Server Database 8 is the repository for profile information.”); Fig. 14 (below).

FIG. 14

366. Figure 4 depicts the basic functionality of the Profile Manager.

EX1016 at 6:2-7.

The user defines message delivery methods according to the message priority, device security and time schedule. Block 148 is the starting point where the user selects “profile manager” to begin the Profile Manager 4 process. The user enters name, UN identification and PIN 150, where checking 152 against UN Database 8 occurs and access 154 is granted. A profile management menu 156 is then presented to the user for selection 158 of device manager 160, profile manager 162 or schedule manager 164. Upon selection of device manager 160, the user chooses 166 to add and configure new devices 168 for receipt of messaging information sent by the system 10. These include multiple e-mail, voicemail, fax, pager, telephone and wireless communication devices. The user also selects which devices are secure for sensitive or confidential information receipt. Changes to existing devices 170 can also be made for reconfiguration requirements, and all current device parameters are stored in the UN Database 8. Upon selection of profile manager 162, the user chooses 172 to create a profile 174 for each priority and adds communications devices previously selected. The profile designates locations such as work, home, vacation, travel office, travel accommodations and other user preferences. Priority levels are selected based on the importance of communications information to be received. Changes to existing profiles 176 can also be made, and all current profiles are stored in the UN Database 8.

EX1016 at 6:5-30.

UN Client Profile Manager

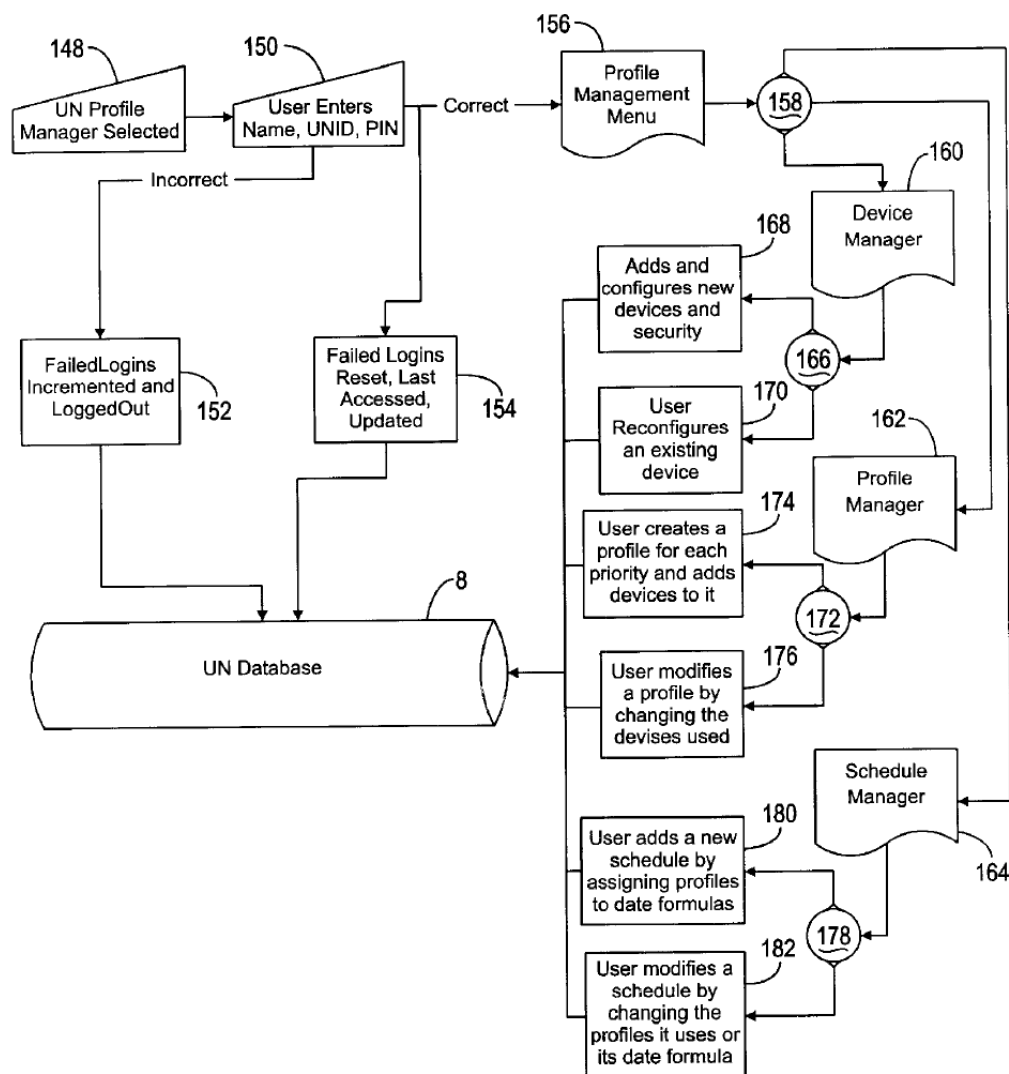


FIG. 4

367. As noted, the profiles, devices, and schedules set up by profile manager are all “stored in the UN Database 8” for future access. EX1016 at 6:35-40.

368. Also as noted, Smith further teaches that (1) the profile manager is part of a toolbar provided in Outlook, (2) the UN server provides “Web based

access to Outlook,” and (3) “recipient profiles can be accessed and modified either directly or from the Internet web.” EX1016 at 9:2-3. From this, a POSA would understand that the profile manager of Smith would be accessible on a web site, hosted by the UN server. Accordingly, this software that obtains and receives recipient profile information from recipients corresponds to the claimed “recipient profile application,” part of the “computer system” that receives profile data from recipients via the Internet and stores the data in the database.

369. Since messenger profiles, recipient profiles, and messages are distinct kinds of data in Smith, a POSA would understand that when Smith stores its recipient profile data, it would store the data in what would reasonably be described as a “recipient profile database” (again, according to my discussion of “database” in Section VI.A) . Since the recipient profile database is part of a system relating to message management and providing access to data other than recipient profiles, the POSA would also understand that the recipient profile database is part of the system’s broader message management database.

370. Since Smith receives recipient profile data at the UN server, a POSA would understand that it receives it via “the global network” that is the Internet.

1[b] “the profile data including delivery parameters specified by a recipient of where, when and how specific

types of messages from specific messengers are delivered to the recipient”

371. A POSA would understand that the recipient profile of Smith corresponds to “delivery parameters specified by a recipient of where, when and how specific types of messages from specific messengers are delivered to the recipient”.

372. As described above, the profile manager of Smith “[a]llows the user to Create or Modify Devices, Profiles and Schedules to determine how he/she will be contacted at any given time.” EX1016 at Fig. 10; *see also* 4:40-54. Specifically:

As seen in FIGS. 14, 20, 21, and 22, a recipient sets up his or her recipient profile by making selections from three primary categories: devices, profiles, and schedules... A check box indicates whether or not that selected device is capable of receiving secure (e.g., encrypted) messages. Information about that device, e.g., a phone number for a work phone, is entered. The recipient then selects the “profile” tab so that profile details corresponding to each selected messaging device can be entered. For example, the recipient will determine whether a particular messaging device is to be used for secure messages or not and which messaging devices will correspond to the three levels of message importance. Finally, the recipient selects the “schedules” tab so that the recipient can assign the various profiles to dates and times. For example, at certain times of the day or on certain days of the week, the recipient may wish to receive messages of normal importance at work only. However, if the message is of high importance, then that recipient may wish to receive the message at home or at work.

EX1016 at 9:4-24.

373. Note that while Smith uses the term “recipient profile” to refer to a collection of recipient preferences as in the passage above, Smith also discusses a “profile” tab within the recipient profile control form that is used to allow a recipient to give a name to a circumstance that the recipient associates with certain device delivery settings. *Id.*, Fig. 14, Fig. 21. Thus, a “recipient profile” and the individual “profiles” within it are not the same thing. “The profile designates locations such as work, home, vacation, travel office, travel accommodations and other user preferences. Priority levels are selected based on the importance of communications information to be received.” EX1016 at 6:24-28. As shown in Fig. 14, examples of individual “profiles” stored within a “recipient profile” include “Work” (“Contains devices that reach the user at work”), “TravelWork” (“Devices that will reach the user at a remote office”), “Vacation” (“Devices that will reach the user when on vacation”), etc. This distinction is also reflected in Fig. 8 (“FIG. 8 illustrates the organization of data dictionary tables and data fields in the UN Database used for processing messages and storing recipient profile and response field data”, 3:27-30) showing that each time period in the Schedule 238 may refer to a Profile 236 that is in turn associated with Devices 232.

374. Smith describes its “device manager 160” for configuring receipt of messaging information including “multiple e-mail, voicemail, fax, pager, telephone

and wireless communication devices” where “all current device parameters are stored in the UN Database 8”:

Upon selection of device manager 160, the user chooses 166 to add and configure new devices 168 for receipt of messaging information sent by the system 10. These include multiple e-mail, voicemail, fax, pager, telephone and wireless communication devices. The user also selects which devices are secure for sensitive or confidential information receipt. Changes to existing devices 170 can also be made for reconfiguration requirements, and all current device parameters are stored in the UN Database 8.

EX1016, 6:14-21.

375. Accordingly, and as described above, a user may determine which devices (*e.g.*, email, fax, pager, phone) are to receive messages according to their circumstances. To deliver messages, the Messaging Device Manager “converts the message information received from the UN Client into the proper format for receipt and response by a recipient.” EX1016 at 4:47-49. This shows that the recipient profile controls “how” messages are delivered to the recipient. In addition, the recipient may indicate that a device should receive messages in “encrypted” form. This also controls “how” the message is delivered to the recipient.

376. By selecting Schedule “dates and times” and associating them with certain profile circumstances, a recipient profile determines “when” messages are delivered to the recipient. A POSA would additionally understand that “rules”

route incoming messages in a manner depending on the dates when the messages are received. *See* Section IX.A.3. This constitutes a further example of recipient control of “when” messages are delivered.

377. Similarly, by choosing between the profile circumstances such as “at home or at work,” a recipient profile determines “where” messages are delivered through its selection of individual devices.

378. In addition, a POSA would understand that the device manager 160 accommodates addresses referring to Exchange Mailbox, Fax, Voice Mail, Cc:Mail, Microsoft Mail, MacMail, Internet (SMTP), and X.400 destinations. *See* Section IX.A.2. These constitute further examples of recipient control of “where” messages are delivered. A POSA would additionally understand that “where” messages are delivered is controlled by rules under recipient control, and that these rules may route messages to Exchange Mailbox, Fax, Voice Mail, Cc:Mail, Microsoft Mail, MacMail, Internet (SMTP), and X.400 destinations. *See* Section IX.A.3. The use of these rules constitutes further examples of recipient control of “where” messages are delivered.

1[b] “delivery parameters [depending on] specific types of messages”

379. This claim part uses the term “specific types of messages”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 48.

380. A POSA would understand that by specifying “which messaging devices will correspond to the three levels of message importance” in a recipient profile (EX1016 at 9:15-19), recipients are able to specify message delivery parameters that depend on the “specific types of messages”.

381. A POSA would further know that rules would be established for specific types of messages, because the application of such rules was a basic feature of Outlook 2000 that is part of the Smith disclosure. Therefore, a POSA would understand that Smith works in the Outlook/Exchange/OWA environment that includes such rules. See my discussion of these features known to a POSA in Section IX.A.3.

382. A POSA would understand that “specific types of messages” characterizations are present in the message delivery mechanism, message content, and message headers originating from the messenger. Through the use of Outlook 2000 rules, recipients may determine the manner in which specific types of messages are delivered to the recipient, including through dependencies on the message sender, the message addressee, the message content, the MIME “Content-Type”, and other message headers.

383. Therefore, in my opinion, a POSA would find that the Smith in view of Padwick system’s message content, message header, and “rules” based on those

entities also satisfy the “delivery parameters [depending on] specific types of messages” limitation.

1[b] “delivery parameters [depending on] specific types of messages from specific messengers”

384. A POSA would further know that similar rules would be established for specific senders, because the application of rules to specific senders was a basic feature of Outlook 2000 that is part of the Smith disclosure. For example, Figure 14 shows that Outlook 2000 is used to access the UN Profile Manager. EX1016 at Fig. 14. Therefore, a POSA would understand that Smith works in the Outlook/Exchange/OWA environment that includes such rules. See my discussion of these features known to a POSA in Section IX.A.3.

385. Padwick, in describing the features of Microsoft Outlook 2000, specifically discloses the application of rules to specific message senders. EX1023 at 636 (“[Y]ou may want to create a rule that applies to future messages you receive from a specific sender.”). These rules are similar to those provided by Smith. For example, Smith describes that:

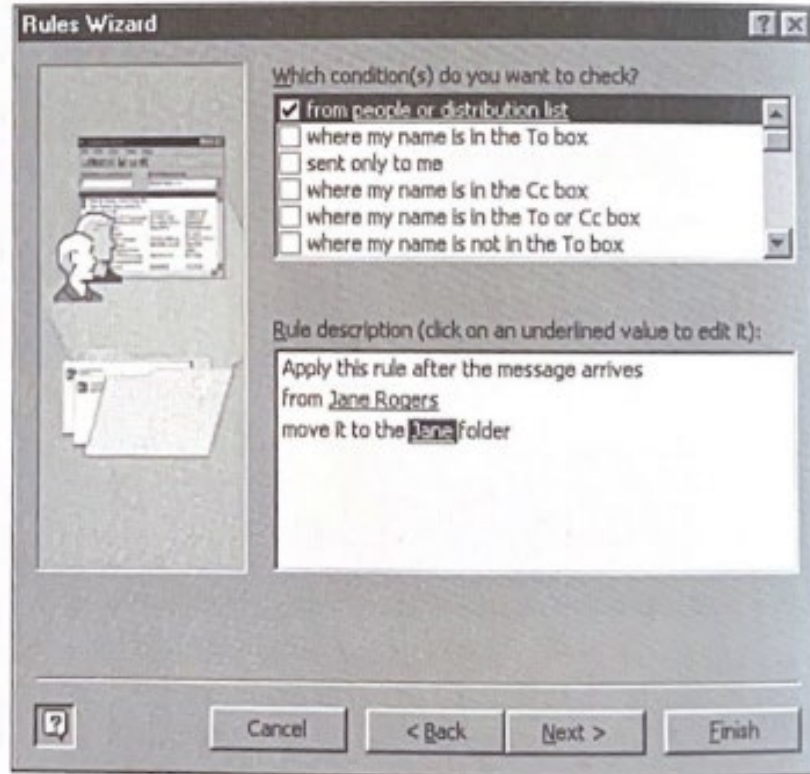
The system 10 delivers messages through any conventional messaging device from an initial e-mail interface using recipient defined contact rules, and provides responses quickly back to the message sender in a controlled and defined format.

EX1016 at 5:5-9; *see also* 2:19-24, 2:42-45, 2:57-58, 12:57-65, 13:6-13, 14:45-52, 14:58-61.

386. A POSA would therefore understand that a user of Smith could create rules for the routing of messages and message types from specific senders.

Figure 22.12

Both the original underlined words or phrases in the lower box are replaced with your selections and are now displayed in black.



EX1023 at 628 (applying specific rules from a specified sender using the “Rules Wizard”).

387. As I discussed, Padwick discloses the creation of rules that apply to specific senders and message types, *e.g.*, example, a rule is applied to all messages from a sender or based on content and message type, and this would be known to POSA. EX1023 at 618-46; EX1017 at 51-63. For example, I note that the Outlook “Rules Wizard” in Outlook 2000 enables an email recipient to apply specific rules to a specified sender, such as “Jane Rogers” along with message types such as

“high importance”. EX1023 at 624-32; *see also* 634-35 (disclosing various rules such as move, delete, assign category, flag, and notify that may be used alone or in combination); EX1017 at 51 (Rules Wizard allows for “automatically delete, forward, reply, move and perform several other actions” on emails from senders including specific senders and message types for importance).

388. Thus, for the reasons above, Smith in view of Padwick discloses “a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database, the profile data including delivery parameters specified by a recipient of where, when and how specific types of messages from specific messengers are delivered to the recipient.”

1[c] “a messenger profile application for receiving messenger profile data from messengers via the global network and storing the messenger data in the database, including messenger identifying data”

389. In my opinion, Smith in view of Padwick discloses claim 1[c].

390. This claim part uses the term “database”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41.

391. The only specific “messenger profile data” that this limitation requires to be received and stored is “messenger identifying data.”

392. In the system of Smith, senders and recipients both use the UN Client. This is evident in Figure 1, which shows both Author 2 (message senders) and

Profile Manager 4 (for managing recipient profiles) as part of the UN Client. This is also shown by the discussion in Smith of licensing the system. “Licensed UN Client users are registered through a UN Administration Console (not shown). UN Clients can be added and deleted up to the license limitations using e-mail address identifications. UN Client licenses can be purchased for additional users. Only senders must be licensed, as recipients can establish profiles and respond without a UN Client software license.” EX1016 at 11:43-49.

393. A POSA would understand that such licensing information would be received via the UN Administration Console and held in a database at the UN server, to enable the Smith system components to enforce the license limitations. Thus, messenger identifying data (“e-mail address identifications”) of users who are licensed and therefore able to send UN messages and receive responses are provided by users of the UN Administration Console.

394. A POSA would also understand that system managers are responsible for installing and/or maintaining the UN system. See, e.g., EX1016 at 11:53-67, 12:5-9 (“UN Client and UN Server modules are initially installed using the Microsoft Windows Installer Service. This is a quick and easy process administered by the system manager. The Administration Console is then accessible from the System Manager’s designated desktop.”) A POSA would also understand that system managers would normally be licensed to send messages and

receive responses at least for testing and maintenance purposes, and therefore these system managers would be “messengers”. EX1016 at 11:59-67. In addition, these system managers would also provide messenger profile data about themselves as messengers (*i.e.*, license themselves by e-mail address identification) in addition to messenger profile data about other messengers in the system. Thus, the code that obtains and receives licensed user messenger identifying data and associated information and stores it in a database due to use of the Administration Console by such system managers satisfies the requirement of “a messenger profile application for receiving messenger profile data from messengers”.

395. Smith also indicates that the Administration Console is used to provide information beyond the e-mail address identifications used for licensing. For example, “The Administration Console provides management of system defaults, Web page profile and response configurations, and activity reports such as traffic, transmission and errors.” EX1016 at 11:59-62. A POSA would understand “system defaults” and/or “Web page profile and response configurations” to be customizable on a per-sender basis. For example, it would be useful for some, but not all, senders to use “Importance: High” and “Sensitivity: Confidential” defaults when composing new messages. Such fields are shown in Fig. 13. Boilerplate and other content to be sent with messages to be viewed in Web browsers would be examples of “Web page profile [] configurations.” For

example, by comparing the message composition screen shown in Fig. 13 with the response display in Fig. 17, one can see that the received response has content prior to the opening “Attention Sales Personnel” line, including the header “Universal Notification Response For Message #3567894” along with decorative graphics. A “Web page profile” configuration would be used to include such content, along with sender-specific letterhead, disclaimers, etc. A “response configuration” may determine the exporters used in association with response fields in the message. EX1016 at 5:30-35, 9:54-65. In addition, “The Administration Console also manages messaging priority limitations for all registered Client users.” EX1016 at 11:53-54.

396. A POSA would also understand that some deployments would permit authorized messengers other than system managers to access the Administration Console. For example, a company may delegate authority to its Communications Department staff to decide who in addition to their own department is licensed to use the Smith system to contact its employees, and/or to set their own messaging system defaults and Web page profile and response configurations. As another example, a POSA would know that the engineering team that developed the Smith system product would continually test it in preparation for market release—and therefore these developers would routinely use the Administration Console and would license themselves to send messages as part of their testing. In all such

circumstances, the code that obtains and receives licensed user messenger identifying data and associated information and stores it in a database from use of the Administration Console also satisfies the requirement of “a messenger profile application for receiving messenger profile data from messengers”.

397. Smith also describes a mechanism for directing responses to licensed senders involving creation and configuration of “MID notification folders” that also demonstrates the receipt of messenger data. Specifically, Smith teaches that the Response Monitor 6 on the UN Server “monitor[s] the UN Folder (FIGS. 11 and 15) and check[s] for new entries on a periodic basis. It routes the responses from the UN Folder to the specific UN MID based folders based upon a Message ID (MID) number. It also sets permissions on this folder. The UN Folder is a specific folder that resides on Microsoft Exchange Server. The specific UN MID based folders are unique folders for which the message creator corresponding to the MID folder name has access privileges. The originator of the message can maintain and view messages from a MID folder.” EX1016 at 9:31-42.

398. A POSA would understand that assigning these permissions and access privileges requires the MID folder to be configured with a reference to the messenger’s identity so that permissions can be granted to that identity. This requires code to receive the messenger’s identity and use it to create and configure the appropriate folders used for the responses. A POSA would recognize the code

implementing this activity as performing the claimed function of a messenger profile application for receiving messenger profile data from messengers via the global network and storing the messenger data in the database,¹⁴ including messenger identifying data.

399. Since messenger profiles including messenger data, recipient profiles, and messages are each distinct kinds of data in Smith, a POSA would understand that when Smith stores its messenger data, it would store the data in what would reasonably be described as a “messenger profile database” (again, according to my discussion of “database” in Section VI.A) . Since the messenger profile database is part of a system relating to message management and providing access to data other than messenger profile data, the POSA would also understand that the messenger profile database is part of the system’s broader message management database.

¹⁴ Note that Joshi explains that “***The Microsoft Exchange information stores (public and private) are the databases*** that hold all Microsoft Exchange messaging information. In addition, the information store is the primary storage system for information relevant to users, ***including*** messages, server-based mailboxes and their contents, ***public folders and their contents, private folders that are stored on a server*** instead of on a user’s computer, documents, forms, and user-defined items.” EX1029 at 316 (emphasis added).

400. Since Smith receives the messenger profile data at the UN server, a POSA would understand that it receives it via “the global network” that is the Internet.

401. By way of further example, the messaging system of Maxwell describes similarly requiring a sender database and ID data to keep track of sender payment. EX1018 at Fig 13, 9:6-8, 9:27-30.

1[d] “a message input application for receiving message files from a messenger via the global network and storing the message files in the database, and”

402. In my opinion, Smith in view of Padwick discloses claim 1[d].

403. Specifically, Smith describes that its “UN Client” includes a “message author” module. This module presents message senders with “a blank UN universal message form” in which the user “select[s] from a list of recipients” and enters a “message body and attachments.” EX1016 at 5:12-28. A flow chart of this module is shown as Figure 2:

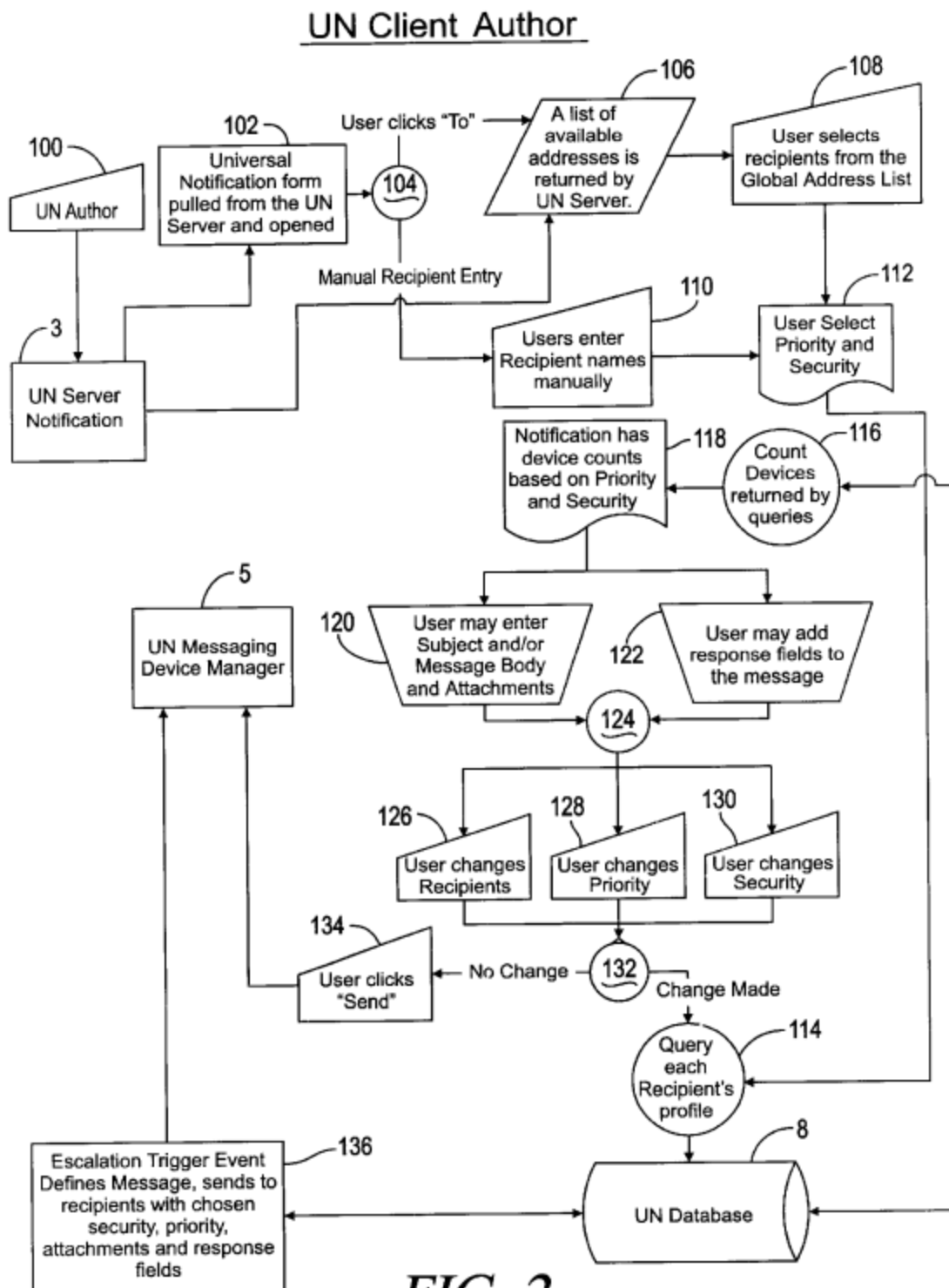


FIG. 2

404. Smith's description of Fig. 2 includes the following:

FIG. 2 is a flow chart describing the functioning of the Message Author module 2 software routines used in the initiation of manual and triggered messages according to the present invention. Block 100 is the starting point where the user selects “new notification” to begin the messaging process with a blank UN universal message form at block 102 opened in the UN Server Notification module 3.

EX1016 at 5:12-19.

405. I note that Fig. 2 describes block 102 as “Universal Notification form pulled from the UN server and opened”.

406. Smith further describes the Author Module at EX1016 at 8:10-16:

Looking now at FIG. 9, the Message Author 2 is the starting point for implementation of the system 10 in a Microsoft Windows/Outlook/Exchange Server computing environment. The user chooses Message Author 2 with new UN notification on screen to begin the messaging process. The user is presented with a universal message form as shown on FIG. 13.

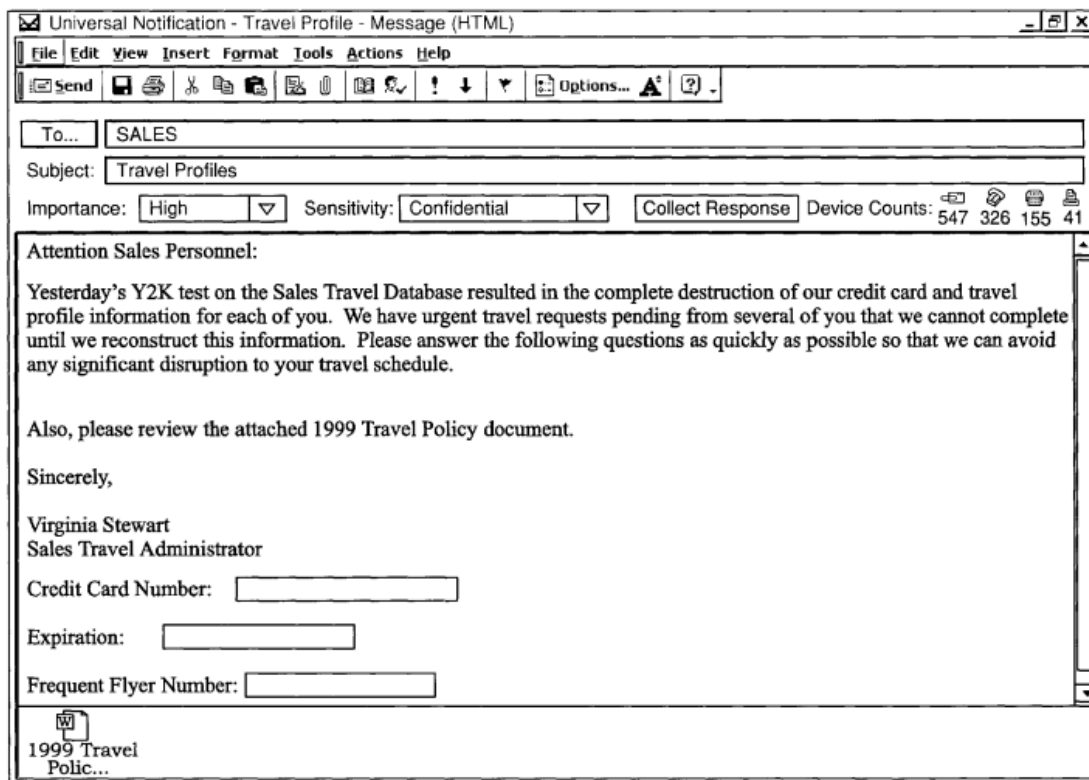


FIG. 13

EX1016 at Fig. 13.

407. In Figure 13, “the user is presented with a standard universal message form. He/she then selects the recipient from the global address list, adds fields if desired, fills out the message form, and sends the message.” EX1016 at 10:53-57; *see also* 3:45-48, 8:10-32, 10:48-61. Then, “Once the message is sent, the UN Server provides text-to-speech conversion and voice mail navigation for phone and voice mail recipients, and manages message notification for all messaging devices indicated in conjunction with Microsoft Exchange Server.” EX1016 at 10:61-65; *see also* Fig. 9.

408. A POSA would understand that the message files are stored “in the database”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41. The messages are sent from the message author to the UN Server, as disclosed in Figure 9 of Smith. *See also* EX1016 at 5:53-55, 10:61-65.

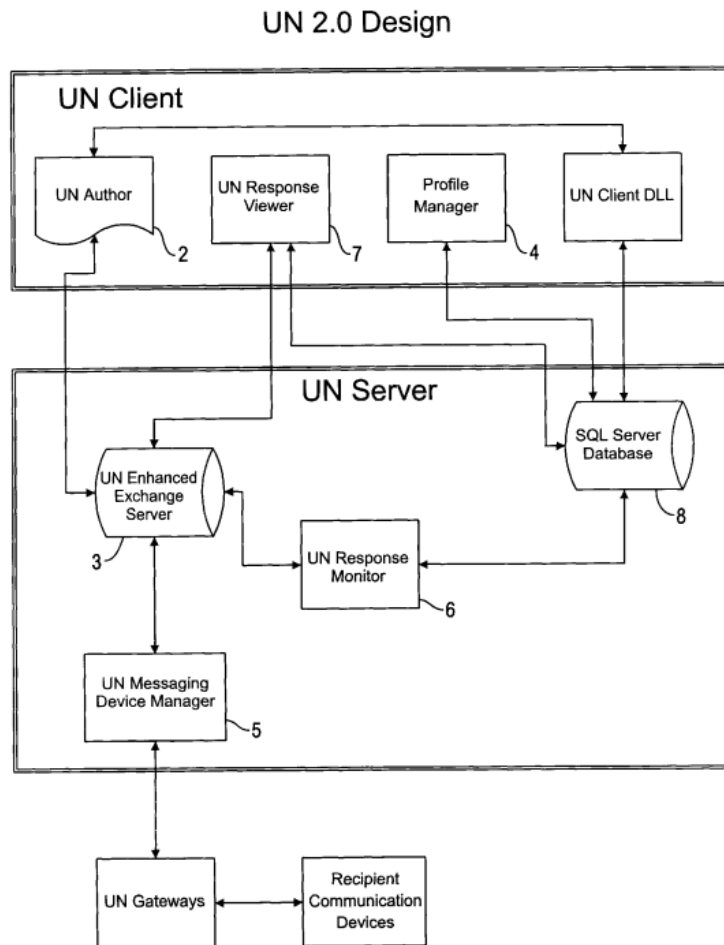


FIG. 9

409. A “system database” in Smith may store a variety of information, including “the recipient profiles, *messages*, and message response information.” EX1016 at 13:13-20, 14:45-52, 15:16-16:5.

410. A POSA would also understand that when a sender sends messages in Smith, these messages would be stored in a “database” of Exchange as part of that process (as I explained above and according to my discussion of “database” in Section VI.A). Such a database is necessarily part of Exchange, since Exchange must receive and store the message to process and route it further toward its destination, to be able to detect when messages cannot currently be transmitted due to network constraints, transient errors, and similar situations, and to inspect the message and apply installation-specific policy and rules. *See* ¶ 74 in Section IX.A.1 on message flow, Section IX.A.3 on Exchange Rules, and IX.A.4 on Exchange Forms. As I explained in Section X.A beginning at ¶ 151, a POSA would recognize that rules may be expressed within one or more Message Exchange Forms. A POSA would also understand that outbound messages are stored in Exchange folders, typically “Sent Items—For copies of messages you’ve sent”. EX1023 at 914.

411. Since messenger profiles, recipient profiles, and messages are each distinct kinds of data in Smith, a POSA would understand that when Smith stores messages in UN server, it would store the messages in what would reasonably be described as a “message database” (according to my discussion of “database” in Section VI.A). Since the message database is part of a system relating to message management and providing access to data other than messages, the POSA would

also understand that the message database is part of the system's broader message management database.

412. Because the message author module is a part of the UN Client and the message is received by UN Server, and also because Smith discloses that Outlook can be "Web based," a POSA would understand Smith to teach that the message author module would be provided by the server over the Internet. Accordingly, the code that obtains and receives messages from the message author module corresponds to the claimed "a message input application for receiving message files from a messenger via the global network."

413. Accordingly, Smith discloses that its computer system includes "a message input application for receiving message files from a messenger via the global network and storing the message files in the database."

1[e] "an individual message generator in communication with the database and operative to access and utilize data and files from the database to generate an individual message to be sent to the recipient specified by the messenger via the global communications network according to the delivery parameters; and"

414. In my opinion, Smith in view of Padwick discloses claim 1[e].

415. A POSA would understand that the "Messaging Device Manager" of Smith corresponds to the claimed "an individual message generator in communication with the database and operative to access and utilize data and files from the database to generate an individual message to be sent to the recipient

specified by the messenger via the global communications network according to the delivery parameters” because Smith describes that its Messaging Device Manager accesses both the message files and the data necessary to determine the proper format for a message according to a recipient’s preferences.

416. For example, the “Messaging Device Manager 5 converts the message information received from the UN Client into the proper format for receipt and response by a recipient”. EX1016 at 4:46-49. And said format “corresponds to the messaging device(s) selected by the recipients and stored in their respective client profiles”. EX1016 at 4:50-52. To do so, the Messaging Device Manager of course also accesses messages. EX1016 at 8:46-50 (“Specially named folders residing on Exchange handle forwarding of non-email based messages. The Messaging Device Manager 5 monitors these folders and directs their messages to the appropriate gateway (FIG. 9).”).

417. I explained in my analysis of limitations 1[b], 1[c], and 1[d] that recipient profile data, messenger profile data, and message files are stored in the database. I also explained in my analysis of limitation 1[b] that the recipient profile data includes delivery parameters that control whether and how messages are sent to the recipient via the recipient’s devices.

418. Moreover, messages are processed by the Messaging Device Manager after recipients have been specified. This is disclosed explicitly in Smith. *E.g.*,

EX1016 at 5:50-57 (“A new UN message form 138 is created when the Message Author 2 requests ‘new notification’, and the global address list 140 is opened for recipient selections. Upon completion of the process illustrated in FIG. 2, messages are sent to the Messaging Device Manager 5. This is where all outgoing communications are addressed for proper recipient messaging device communications.”); EX1016 at 5:19-23 (“The user proceeds to block 104 to start entry of other message information selecting from a list of recipients 106, 108 on a global address list opened in the UN Server Notification module 3, or entered manually 110.”).

419. Accordingly, a POSA would understand that the recipient would have been “specified by the messenger via the global communications network.”

1[f] “a message management server operating system; and”

420. In my opinion, Smith in view of Padwick discloses claim 1[f].

421. Smith explicitly names operating systems that can be used with the UN system, such as “in a computing platform that uses Windows 98 or Windows 2000 as its operating system.” EX1016 at 8:1-4. A POSA would understand that these operating systems, operating on the computer system of the UN server, correspond to the claimed “message management server operating system.”

1[g] “the message management database including recipient and messenger profile databases for storing recipient and messenger

profile data respectively, and a message database for storing message data files”

422. In my opinion, Smith in view of Padwick discloses claim 1[g].

423. This claim part uses the term “database”. I incorporate herein my discussion of that term as it is used in the ’920 patent from Section VI.A beginning at ¶ 41.

424. As described above in connection with limitation 1[b], Smith discloses a UN SQL server database that includes recipient profile databases:

The UN SQL Server Database 8 is the repository for profile information. Preferably, the Database 8 will reside on the same computer that supports the UN Server although it could be located in a separate sub-system. The Database 8 is also the repository of information about the fields for a response and setup information.

EX1016 at 9:48-53.

425. As also discussed, the server further includes Exchange:

For medium and large customers where traffic and channel density increases, the UN Client and UN Server exploit Microsoft NT multithreaded architecture, SQL Server and Exchange Server. Exchange and SQL Servers provide communications and database standards for full CTI compatibility.

EX1016 at 12:17-22.

426. A POSA would understand further that the Exchange server stores messages in its Information Store as well as in the Folders depicted in Figure 11.

See Section IX.A.1.

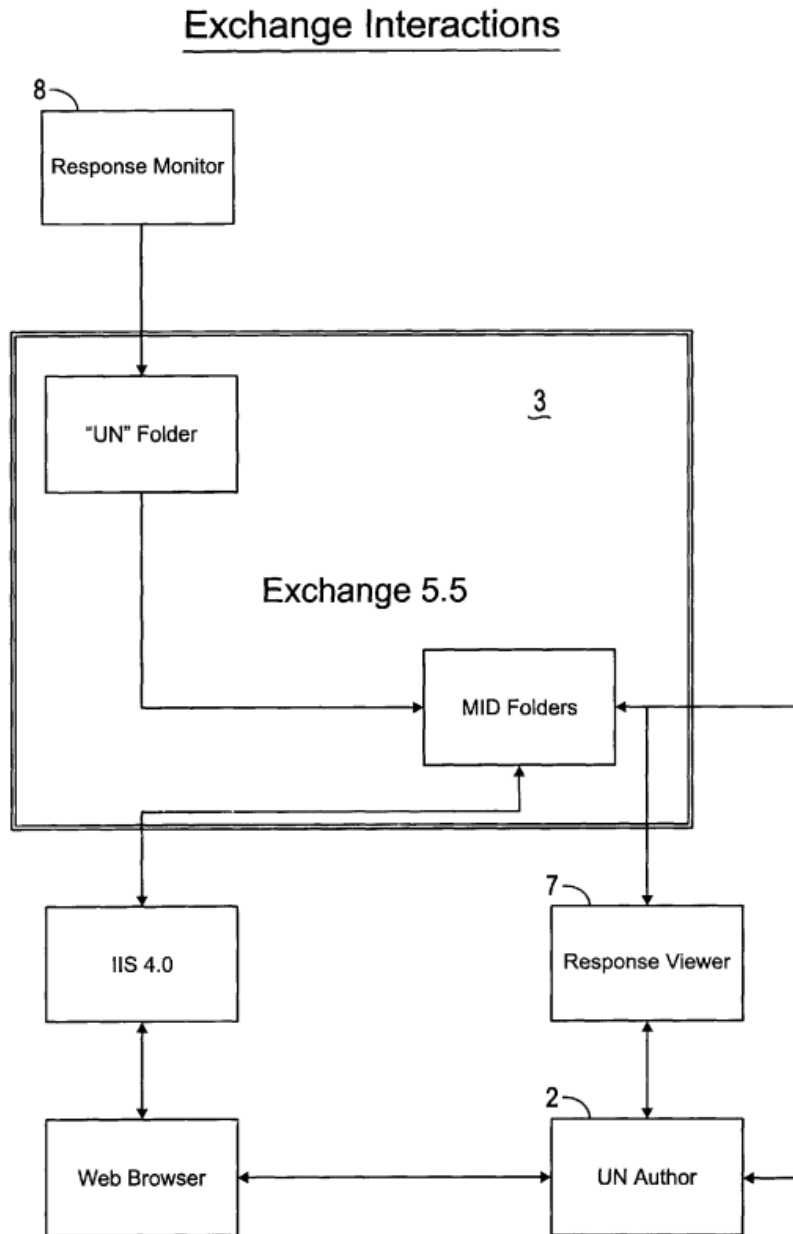


FIG. 11

EX1016 at Fig. 11.

427. Smith does not specifically describe the structure used to store the sender profile (*e.g.*, the license and log in information for senders). However, a POSA would have inferred that this information is stored similar to the recipient

profiles, as Smith describes them as managed by administrators in a similar way.

EX1016 at 11:49-52 (“All global address list entries are initially notified of the UN Profile Manager opportunity from the Administration Console, where both registered Client users and recipient profiles are managed.”).

428. Smith also discloses that its “system database” may store a variety of information, including “the recipient profiles, messages, and message response information.” EX1016 at 13:13-20, 14:45-52, 15:16-16:5.

429. According to my discussion of “database” in Section VI.A, a POSA would understand that the recipient profile database, the messenger profile database, and the message database considered together form the message management database. Although the constituent member databases are distinct, they are used in concert for message management.

430. Thus Smith discloses “the message management database including recipient and messenger profile databases for storing recipient and messenger profile data respectively, and a message database for storing message data files.”

2. Claim 2

“The electronic message management system of claim 1, wherein the recipient profile application includes a global network interactive recipient profile input form, the recipient profile input form being accessible to a recipient computer via the global digital communications network.”

431. In my opinion, Smith in view of Padwick discloses claim 2.

432. I discussed in Sections IX.A.4 and IX.D above the well-known and conventional interactive input forms which allow input from users, whether those users are senders, recipients, or others.

433. As discussed in connection with limitation 1[b], Smith discloses the claimed “recipient profile application” that presents a form to the user and receives the associated information. EX1016 at 4:3-12, Figures 20-22. When rendered to the user as a web page in “Web based access to Outlook” via a “conventional Internet Web Browser”, it also appears as a form that the user may fill out and submit. EX1016 at 4:3-12, 8:59-63, 14:7-9, Fig. 11, Figures 20-22.

Profile Manager

Actions Tabs

Devices Profiles Schedules

Phone

Home Phone

Work Phone

Settings

Device Name: Work Phone

Phone Number: (615)790-2882

Pages per Message: 0 Characters: 0

Device Secure: ☒

Pager Settings

Ok Cancel Apply

FIG. 20

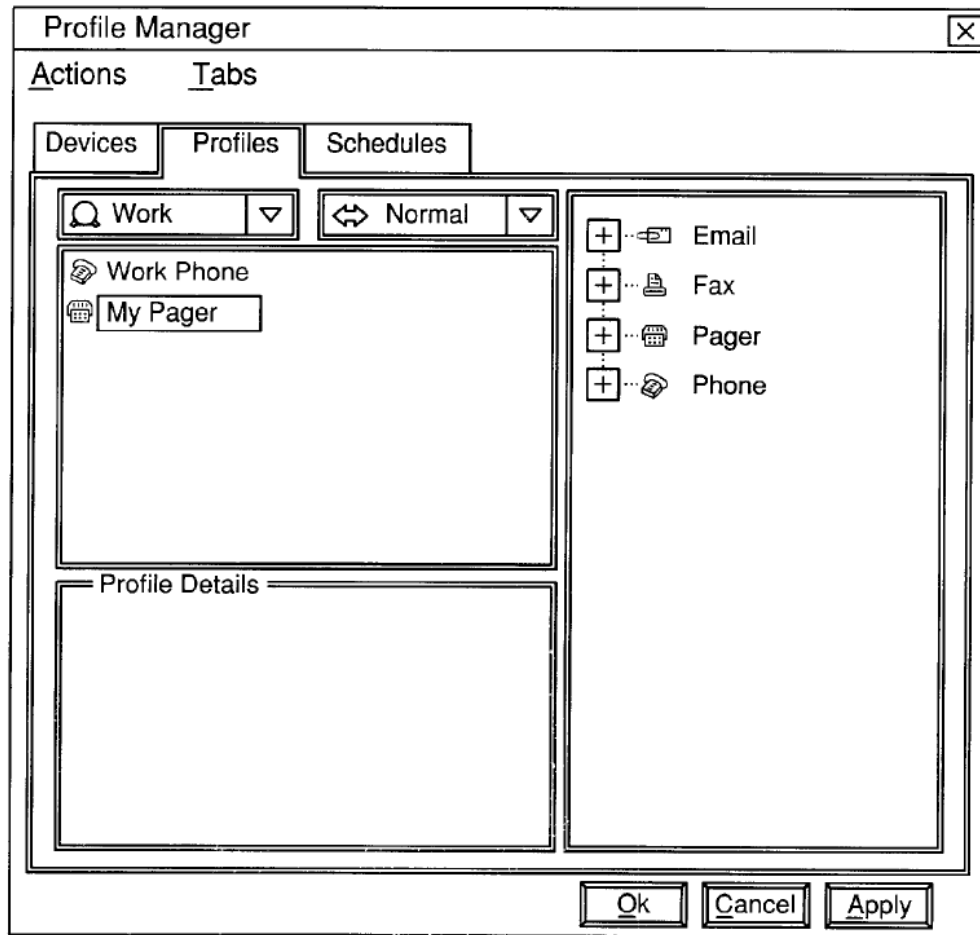


FIG. 21

The screenshot shows a window titled "Profile Manager" with a close button (X) in the top right corner. Below the title bar are two tabs: "Actions" and "Tabs". Under the "Tabs" tab, there are three sub-tabs: "Devices", "Profiles", and "Schedules". The "Schedules" sub-tab is currently selected.

Inside the "Schedules" sub-tab, there is a calendar for February 1999. The calendar shows the days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) and the dates. The dates are: 31, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.

To the right of the calendar is a table with two columns: "Time" and "Profile". The table lists the following times and profiles:

Time	Profile
4:00am	Home
4:30am	Home
5:00am	Home
5:30am	Home
6:00am	Work
6:30am	Work
7:00am	Work
7:30am	Work
8:00am	Work
8:30am	Work
9:00am	Work

Below the table is a search bar with a magnifying glass icon and the text "Work". At the bottom of the window are three buttons: "Ok", "Cancel", and "Apply".

FIG. 22

EX1016 at Fig. 20-22.

434. Since Smith receives the corresponding form data at the UN server, a POSA would understand that it receives it via “the global digital communications network” that is the Internet, and the input form is therefore a “global network... information form” that is “accessible to a recipient computer via the global digital communications network.”

3. Claim 3

“The electronic message management system of claim 1, wherein the messenger profile application includes a global network interactive messenger profile input form, the messenger profile input form being accessible to a messenger computer via the global digital communications network.”

435. In my opinion, Smith in view of Padwick discloses claim 3.

436. I discussed in Sections IX.A.4 and IX.D above the well-known and conventional interactive input forms which allow input from users, whether those users are senders, recipients, or others.

437. As discussed in connection with limitation 1[c], Smith discloses the claimed “messenger profile application” associated with the UN Administration Console that receives messenger profile data, including messenger identifying data, system defaults, Web page profile and response configurations, and messaging license limitations. A POSA would understand that the Administration Console would use the same user interface of Smith, namely, the use of interactive forms. *See, e.g.*, “universal message form” (Abstract, Fig. 3, Fig. 13, Fig. 17, Figures 20-22, 5:17, 8:15-16, 8:28-31, 10:54-55, 12:50-56, 14:51-43), “Universal Notification Form” (Fig. 2 at 102, Fig. 12); “UN response form” (Fig. 3 at 146, 5:62-67, 7:15-20), “Custom Fields Form” (Fig.12), “Response Viewer Form” (Fig. 16), etc. When rendered to the user as a web page in “Web based access to Outlook” via a “conventional Internet Web Browser”, it would also appear as a form that the user

may fill out and submit, along the lines of the recipient profile input form of claim 2. EX1016 at 4:3-12, 8:59-63, Fig. 11, Figures 20-22.

438. Since Smith receives the corresponding form data at the UN server, a POSA would understand that it receives it via “the global digital communications network” that is the Internet, and the input form is therefore a “global network... information form” that is “accessible to a messenger computer via the global digital communications network.”

4. Claim 4

“The electronic message management system of claim 1, wherein the message input application includes an interactive global network message input form, the message input form being accessible to a messenger computer via the global communications network.”

439. In my opinion, Smith in view of Padwick discloses claim 4.

440. I discussed in Sections IX.A.4 and IX.D above the well-known and conventional interactive input forms which allow input from users, whether those users are senders, recipients, or others.

441. As discussed in connection with limitation 1[d], Smith discloses the claimed the claimed “message input application” that presents a form to the user and receives the associated information. As discussed, Smith discloses that the messages are input via a “universal message form.” EX1016 at 8:15-31; *see also* 5:12-44, Fig. 2, Fig. 13.

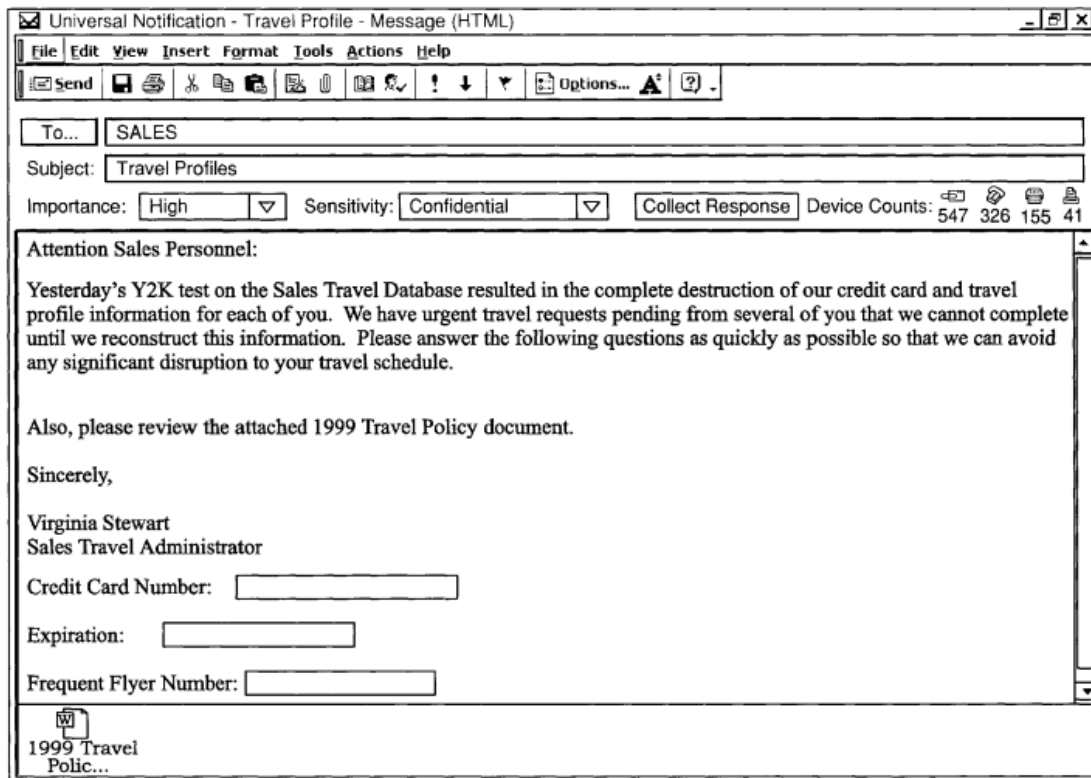


FIG. 13

EX1016 at Fig. 13.

442. When rendered to the user as a web page in “Web based access to Outlook” via a “conventional Internet Web Browser”, the user interface also appears as a form that the user may fill out and submit. EX1016 at 8:59-63, Fig. 11.

443. Since Smith receives the corresponding form data at the UN server, a POSA would understand that it receives it via “the global digital communications network” that is the Internet, and the input form is therefore a “global network...

information form” that is “accessible to a messenger computer via the global digital communications network.”

5. Claim 5

“The electronic message management system of claim 1, wherein the recipient profile application further comprises a network interface and a recipient profile editor for receiving recipient profile data from a recipient computer via the global network interface and for manipulating the recipient profile database to store the recipient profile data.”

444. In my opinion, Smith in view of Padwick discloses claim 5.

445. The claim language here simply adds the requirement that the application of this claim has access to a network interface and receives the claimed recipient profile data via this interface.¹⁵ The claim further identifies the portion of the application that receives the recipient profile data via the interface as the “recipient profile editor” and describes its storage of the recipient profile data in the database as “manipulating” the database.

446. Ordinarily, “a network interface” refers to a piece of hardware, as it does in the ’920 Patent itself:

¹⁵ I note that claim 5 refers to “the global network interface” but does not appear to define that term. Instead, it states that “the recipient profile application further comprises a network interface...” I regard this as a typographical error with the understanding that “the global network interface” refers to “a network interface” in this instance. While claims 6 and 7 are similar in form to claim 5, they consistently refer to a “global network interface”.

[A] network interface can be practiced using any of a number of devices known to the ordinary skilled artisan, such as an analog modem, a ISDN modem, a cable modem, a satellite transmission interface (e.g., “Direct PC), or another interface for coupling one computer system to other computer systems. Client computer systems 40-43 are coupled to LAN buses 33 and 34 through network interfaces 35-38, which can be Ethernet network or other network interfaces. The LAN buses 33, 34 are also coupled to gateway computer systems 31, 32, which can provide firewall and other Internet related services for the LANs 33, 34.

EX1001 at 5:65-6:10.

447. However, given the requirement of this claim language (and the claim language of claims 6 and 7 below) that an “*application* comprises a network interface,” a POSA would understand this to express a requirement that the application relies upon the network interface for transmission and/or receipt of information. Generally, a POSA would understand that an application that uses the Internet necessarily does so via such a network interface.

448. As I described above, in connection with claim 1[b] and claim 2, Smith discloses the claimed “recipient profile application”, which receives profile information from recipients over the Internet via an interactive form and stores the data in the database.

449. Accordingly, a POSA would understand that the software used to take information from multiple client computers via the Internet and store it in a database separate from those client computers comprises “a network interface.”

EX1016 at 12:9-12 (“The UN Server resides on a LAN...”); *see also* EX1016 at 8:59-63.

450. A POSA would also understand that, because the manipulation of the database is implemented via the UN server as part of “a recipient profile application for receiving recipient profile data from recipients via the global network and storing the recipient data in the database,” the associated software used to update the database comprises the claimed “a recipient profile editor ... for manipulating the recipient profile database to store the recipient profile data.”

6. Claim 6

“The electronic message management system of claim 1, wherein the messenger profile application further comprises a global network interface and a messenger profile editor for receiving messenger profile data from a messenger computer via the global network interface and for manipulating the messenger profile database to store the messenger profile data.”

451. In my opinion, Smith in view of Padwick discloses claim 6.

452. Similar to claim 5, the claim language here simply adds the requirement that the application of this claim has access to a network interface and receives the claimed messenger profile data via this interface. The claim further identifies the portion of the application that receives the messenger profile data via the interface as the “messenger profile editor” and describes its storage of the messenger profile data in the database as “manipulating” the database.

453. As I discussed above for claim 1[b] and claim 3, Smith discloses the claimed “messenger profile application”, which receives profile information from messenger over the Internet via an interactive form and stores the data in the database.

454. As I discussed for claim 5, a POSA would understand that the software used to take information from multiple client computers via the Internet and store it in a database separate from those client computers includes “a network interface.” EX1016 at 12:9-12, EX1016 at 8:59-63.

455. Similar to my discussion in claim 5, a POSA would understand that, because the manipulation of the database is implemented via a web server as part of “a messenger profile application for receiving messenger profile data from messengers via the global network and storing the messenger data in the database,” the associated software used to update the database comprises the claimed “a messenger profile editor ... for manipulating the messenger profile database to store the messenger profile data.”

7. Claim 7

“The electronic message management system of claim 1, wherein the message input application further comprises a global network interface and a message data file editor for receiving a message file data from a messenger computer via the global network interface and for manipulating the message database to store the message data file.”

456. In my opinion, Smith in view of Padwick discloses claim 7.

457. Similar to claim 5, the claim language here simply adds the requirement that the application of this claim has access to a network interface and receives the claimed message file data via this interface. The claim further identifies the portion of the application that receives the message file data via the interface as the “messenger data file editor” and describes its storage of the message file data¹⁶ in the database as “manipulating” the database.

458. As I discussed above for claim 1[d] and claim 4, Smith discloses the claimed “message input application”, which receives message files from messengers over the Internet via an interactive form and stores the message files in the database.

459. As I discussed for claim 5, a POSA would understand that the software used to take information from multiple client computers via the Internet and store it in a database separate from those client computers includes “a network interface.” EX1016 at 12:9-12, EX1016 at 8:59-63.

460. Similar to my discussion in claim 5, a POSA would understand that, because the manipulation of the database is implemented via a web server as part of “a message input application for receiving message files from a messenger via

¹⁶ While claim 7 recites “a message file data” and then “the message data file”, a POSA would understand these as referring to the same entity, both being “message files” and “message data files” of claim 1.

the global network and storing the message files in the database,” the associated software used to update the database comprises the claimed “a message data file editor . . . for manipulating the message database to store the message data file.”

8. Claim 8

8[pre] “A method of inputting data into the message management system of claim 1 from client computers via a global communications network, to centrally manage the distribution and delivery format of electronic messages from multiple messenger sources to multiple individual recipients, comprising the steps of:”

461. In my opinion, Smith in view of Padwick discloses claim 8 for the same reasons discussed in connection with claim 1.

462. Regardless of whether the preamble is limiting, the combination of Smith and Padwick discloses and renders obvious the claimed “method ...”

463. As I discussed above in claim 1 and further below, Smith discloses or renders obvious the limitations of claim 1 and includes client computers (recipient and messenger computers), a global communication network (Internet), and that the system centrally manages the distribution and delivery format of electronic messages from multiple messenger sources to multiple individual recipients.

464. I provide further analysis below for limitations 8[a] through 8[e].

8[a] “providing the client computers with access to the message management system via a global communications network, where the client computers are messenger and recipient computers;”

465. In my opinion, Smith in view of Padwick discloses limitation 8[a].

Smith discloses providing client computers (including both messenger and recipient computers as discussed in limitations 1[a]-1[c]) access to the UN Server via the Internet.

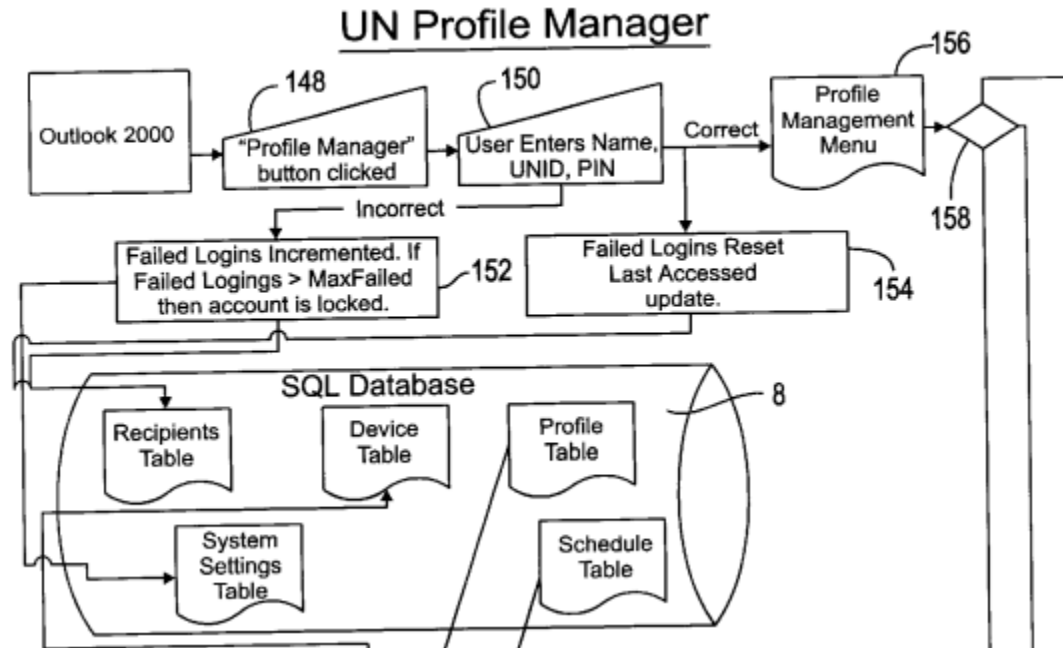
8[b] “receiving a connectivity request from a client computer for access to the message management system to input data:”

8[c] “connecting the client computer to the message management system via the global communication network”

466. I discuss limitations 8[b] and 8[c] together. These limitations are directed towards the simple process of establishing a network connection between a client and a server.

467. In my opinion, Smith in view of Padwick discloses and renders obvious claims 8[b] and 8[c].

468. For example, Smith, which describes users logging on to the UN Profile Manager on the UN Server, discloses claims 8[b] and 8[c]. EX1016 at 7:36-39. For example, in the flowchart of Figure 14, a user clicks the “profile manager” button before entering a Name, UNID, and PIN, whereupon the user is logged in if the information is “correct.”



EX1016 Excerpt of Fig. 14.

469. A POSA would understand that this discloses “a connectivity request from a client computer for access to the message management system to input data” and “connecting the client computer to the message management system” which connection occurs “via the global communication network” (Internet).

8[d] “prompting the client computer for the data to be input by providing a data input form to the client computer; and”

470. In my opinion, Smith in view of Padwick discloses claim 8[d]

471. A POSA would understand that presenting a data input form to a user is a way of prompting for an input.

472. I refer back to my analysis for claims 2-4 and note here that a POSA would understand that Smith provides various “data input forms” in the form of

web pages to sender and recipient computers, which includes prompts (such as fields) to enter data as commonly used on conventional web pages. Similarly, when Exchange provides Property Pages or Exchange Forms from an Information Store to a client computer running Outlook and the client computer presents it to a user for completion, this also satisfies the limitation.

8[e] “accepting input data from the client computer and entering the input data into an electronic message management database of the message management system.”

473. In my opinion, Smith in view of Padwick discloses claim 8[e] for the same reasons as limitations 1[a]-1[d] and claims 2-4.

474. I refer back to my analysis for claim 1, limitations 1[a] through 1[d] and note here that a POSA would understand that Smith discloses that sender profiles, recipient profiles, and messages (*i.e.*, “the input data”) from senders and recipients (*i.e.*, clients) are stored in the database of the message management system, and thus they must be accepted by the appropriate server application to be entered (*i.e.*, “stored”) in the database.

9. Claim 9

“The method of claim 8, wherein the prompting step includes providing an input form to the client computer.”

475. In my opinion, Smith in view of Padwick discloses claim 9.

476. The input forms of this claim are those within Smith web pages and Exchange Property Pages and Exchange Forms. In Smith, these are provided to the client computer (again as in claims 2-4 and 8[d], which analysis I refer back to).

10. Claim 10

“The method of claim 8, wherein the prompting step includes providing an input form to the client computer, the input form being at least one input form selected from the group consisting of a recipient profile form, a messenger profile form, and a message input form.”

477. In my opinion, Smith in view of Padwick discloses claim 10 for the same reasons as claims 2-4 and 8[d] and 9. As discussed regarding claims 2-4 and 8[d] and 9, a POSA would understand that the system of Smith provides various “input forms,” including a “recipient profile form,” “messenger profile form,” and “message input form.”

11. Claim 11

“The method of claim 8, wherein the accepting step includes entering the input data into an electronic message management database comprising a recipient profile database, a messenger profile database, and a message database.”

478. In my opinion, Smith in view of Padwick discloses claim 11 for the same reasons as claims 1 and 8. In my analysis of those claims, I explained how input data is accepted and entered (“stored”) in the database and that the electronic message management database comprises a recipient profile database, a messenger profile database, and a message database.

12. Claim 14

“The electronic message management system of claim 1, wherein the individual message generator communicates with the database to identify messages and messenger parameters that are compatible with a recipient profile, and to configure the messages for delivery to the recipient.”

479. In my opinion, Smith in view of Padwick discloses and renders obvious claim 14.

480. As I described above for limitation 1[e], in the system of Smith, the individual message generator “communicates with the database to identify messages and messenger parameters that are compatible with a recipient profile.” For example, the system must determine how an explicitly named message recipient, the time when the message is being sent, and its importance and security are compatible with a recipient profile to identify which devices should receive the communication and how it should be delivered. The Messaging Device Manager also “converts the message information received from the UN Client into the proper format for receipt and response by a recipient”. EX1016 at 4:46-49. In addition, “Upon completion of the process illustrated in FIG. 2, messages are sent to the Messaging Device Manager 5. This is where all outgoing communications are addressed for proper recipient messaging device communications.” EX1016 at 5:53-57. Thus, the Messaging Device Manager configures messages for delivery to the recipient.

481. A POSA would understand that Exchange also “identif[ies] message and messenger parameters that are compatible with a recipient profile” after having obtained specific recipient addresses from the Messaging Device Manager and having directed these addressed messages to the Exchange MTA for delivery. EX1029 at 67-69. The compatible parameters are identified when the MTA “match[es] the recipient’s address space to an available connector or gateway.” EX1029 at 53. A POSA would understand that the “address space” would correspond to the claimed “messenger parameters” (*i.e.*, the recipient address specified by the messenger), and the connector or gateway it is matched would be determined by addresses in the recipient profile.

13. Claim 15

“The electronic message management system of claim 1, wherein the individual message generator generates and sends the individual message via a means selected from the group consisting of[:] electronic mail, voice telephone, facsimile transmission, and digital transmission.”

482. In my opinion, Smith in view of Padwick discloses claim 15 because its Messaging Device Manager sorts the messages into “media folders for **fax 186**, **voice 188** and **pager 190** formatting,” and because Smith discloses the use of **electronic mail**. EX1016 at 6:47-48, 6:57-58 (“E-mail messages are sent directly to recipient e-mail devices through the Internet.”), *see also* 4:52-57. Furthermore, these communication means also include “digital transmission”.

14. Claim 16

“The electronic message management system of claim 1, wherein the individual message generator generates the individual message and sends the individual message via a means selected from the group consisting of an electronic means and a hardcopy means.”

483. In my opinion, Smith in view of Padwick discloses claim 16 for the same reasons as claim 15. In other words, “electronic means” includes email, fax, voice, and pager as disclosed by Smith. EX1016 at 6:47-48, 6:57-58, 4:52-57.

15. Claim 17

“The electronic message generator system of claim 16, wherein the individual message generator generates the individual message and sends the individual message via an electronic means selected from the group consisting of electronic mail, voice telephone, facsimile transmission, digital transmission, computer network, voice mail, SMS, telex, and wireless transmission.”

484. In my opinion, Smith in view of Padwick discloses claim 17 for the same reasons as claim 15, specifically Smith’s disclosure of “email” “voice,” and “fax.” EX1016 at 6:47-48, 6:57-58, 4:52-57.

XI. CONCLUDING STATEMENTS

485. In signing this declaration, I understand that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for

cross-examination within the United States during the time allotted for cross-examination.

486. I declare that all statements made herein of my knowledge are true and correct. I also declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 35 U.S.C. § 1001.

487. I declare under the penalty of perjury that the foregoing is true and correct.

Executed on April 23, 2023

A handwritten signature in blue ink, appearing to read "David Martin", is written over a horizontal line.

David Martin, Ph.D.