UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FedEx Corp.,
Petitioner

v.

Intellectual Ventures II LLC,
Patent Owner

U.S. Patent No. 6,633,900

Declaration of Tal Lavian, Ph.D.,
in Support of Petition for Inter Partes Review of
U.S. Patent No. 6,633,900

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I. INTRODUCTION

1. I, Tal Lavian, submit this declaration to state my opinions on the matters described below.

2. I have been retained by Petitioners as an independent expert in this proceeding before the United States Patent and Trademark Office.

3. I understand that this proceeding involves U.S. Patent No. 6,633,900 ("the '900 patent"), and I have been asked to provide my opinions as to the patentability of claim 1 of the '900 patent. A copy of the '900 patent is provided as Exhibit 1101.

4. This declaration sets forth my opinions that I have formed in this proceeding based on my study of the evidence, my understanding as an expert in the field, and my education, training, research, knowledge, and personal and professional experience.

5. I have been asked to provide my opinion on whether claim 1 of the '900 patent would have been obvious based on certain prior art references. Based on the combination of prior art references discussed in this declaration, it is my opinion that one of ordinary skill in the art would find claim 1 of the '900 patent to have been obvious.

II. SUMMARY OF MY OPINIONS

6. In my opinion, and as a shown in the analysis that follows, claim 1 of the ’900 patent would have been obvious to a person of ordinary skill in the art.

7. Claim 1 of the ’900 patent recites a method for distributing work order assignment data to a field crew. (Ex. 1101 at 15:7-8.) It includes eight steps (A-H), but each one was well known long before the ’900 patent. Steps A-B and E-H, for example, recite well-known tasks performed in prior art dispatching process:

(A) updating a database with a new work assignment;

(B) notifying a field crew of the assignment;

(E) presenting a list of assignments;

(F, G) retrieving and displaying detailed data regarding an assignment; and

(H) updating the detailed data based on field crew input.

8. The ’900 patent admits that these type of dispatching steps were performed in prior art systems. (Ex. 1101 at 1:18-51.)

9. The remaining steps, C and D, add common login functionality that merely verifies field crew identity and notifies the field crew of a successful login. This kind of generic login functionality was well known and often used in connection with accessing computer systems and networks long before the priority date of the ’900 patent. Steps C and D are untethered to the remaining claim

elements and recite only basic functions of system access that were well known long before the ’900 patent.

10. The ’900 patent, however, purports to have improved the prior art dispatching systems—which allegedly used voice, fax, or proprietary technology for communication—by using TCP/IP. (Ex. 1101 at 1:52-2:38.) Of course, the ’900 patent inventors did not invent TCP/IP, and using these ubiquitous protocols to perform well-known dispatching functions in a new environment is not innovative.

11. Worse yet, claim 1 is not even limited to TCP/IP. It is silent regarding any communication protocol whatsoever, and the only components it recites are an “enterprise computing system,” a “mobile field unit,” and a “database.” (Ex. 1101 at 15:7-11.)

12. As my declaration shows, claim 1 of the ’900 patent is rendered obvious in view of a combination of two prior art references, *Jones* and *Kaman*. These references demonstrate that drivers and/or personnel operating delivery vehicles in the delivery and transportation industry used a mobile unit to exchange information with an enterprise-side dispatching system in order perform each step of claim 1.

13. Thus, as I explain below, each of the elements in claim 1 of the ’900 patent existed and was well-known in the prior art. Moreover, the combination of *Jones* and *Kaman* shows that claim 1 of the ’900 patent is nothing more than the

combination of familiar elements using well-known methods. These combinations, derived from a finite number of predictable solutions, are the product of ordinary skill and common sense, not of any sort of innovation.

III. QUALIFICATIONS AND BACKGROUND

14. I possess the knowledge, skills, experience, training and the education to form an expert opinion and provide testimony in this case. A detailed record of my professional qualifications, including a list of patents and academic and professional publications, is set forth in my curriculum vitae attached to this declaration as Appendix A.

15. I expect to further testify, if asked, regarding the subject matter set forth in this declaration.

16. I have more than 25 years of experience in the networking, telecommunications, Internet, and software fields. In 1987, I obtained a Bachelor of Science ("B.Sc.") in Mathematics and Computer Science from Tel Aviv University, Israel. In 1996, I obtained a Master's of Science ("M.Sc.") degree in Electrical Engineering, also from Tel Aviv University. I received a Ph.D. in Computer Science from the University of California at Berkeley in 2006.

17. I am currently employed by the University of California at Berkeley and was appointed as a lecturer and Industry Fellow in the Center of Entrepreneurship and Technology ("CET") as part of UC Berkeley College of Engineering. I have been with the University of California at Berkeley since 2000 where I served as Berkeley Industry Fellow, Lecturer, Visiting Scientist, Ph.D.

Candidate, and Nortel's Scientist Liaison, where some positions and projects were done concurrently, others sequentially.

18. I have more than 25 years of experience as a scientist, educator and technologist, and much of my experience relates to computer networking technologies. For eleven years from 1996 to 2007, I worked for Bay Networks and Nortel Networks. Bay Networks was in the business of making and selling computer network hardware and software. Nortel Networks acquired Bay Networks in 1998, and I continued to work at Nortel after the acquisition. Throughout my tenure at Bay and Nortel, I held positions including Principal Scientist, Principal Architect, Principal Engineer, Senior Software Engineer, and led the development and research involving a number of networking technologies. I led the efforts of Java technologies at Bay network and Nortel Networks. In addition, during 1999-2001, I served as the President of the Silicon Valley Java User Group with over 800 active members from many companies in the Silicon Valley.

19. Prior to that, from 1994 to 1995, I worked as a software engineer and team leader for Aptel Communications, designing and developing mobile wireless devices and network software products. I developed a Personal Communication System (PCS) including a two-ways mobile wireless messaging architecture. Part of the solution was the development of a Personal Digital Assistant (PDA) on the

mobile side, and a central data handling service at the server side. The two-way messaging system had similar characteristics to today's short message service (SMS) on smartphones.

20. As part of our testing tools, I developed a geographic communication system that collected and transmitted the geographic physical location, and the wireless signal received to determine the quality of the signal received in different urban and metropolitan areas. The system was based on wireless mobile transmitters/receivers and Global Positioning System (GPS) receivers installed on vehicles. The information was transmitted to multiple urban base stations that received the location and the quality of the wireless signal transmission.

21. I also worked on development of two-way wireless OFDM technology, in the 915 MHz band, under the FCC part 15. The technology was a continuation of military research for low power, wideband OFDM to reduce wireless transmission detectability.

22. From 1990 to 1993, I worked as a software engineer and team leader at Scitex Ltd., where I developed system and network communications tools (mostly in C and C++).

23. I have extensive experience in the area of network communications and Internet technologies including design and implementation of computer-based systems for managing communications networks. While with Nortel Networks and

Bay Networks (mentioned above) my work involved the research and development of these technologies. For example, I wrote software for Bay Networks and Nortel Networks Web based network management for Bay Networks switches. I developed Simple Network Management Protocol (SNMP) software for Bay Network switches and software interfaces for Bay Networks' Optivity Network Management System. I wrote software for Java based device management including software interface to the device management and network management for the Accelar routing switch family network management system.

24. I am named as a co-inventor on more than 100 issued patents and I coauthored more than 25 scientific publications, journal articles, and peer-reviewed papers. Furthermore, I am a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE").

25. I currently serve as a Principal Scientist at my company Telecomm Net Consulting Inc., where I develop network communication technologies and provide research and consulting in advanced technologies, mainly in computer networking and Internet technologies. In addition, I serve as a Co-Founder and Chief Technology Officer (CTO) of VisuMenu, Inc., where I design and develop architecture of visual IVR technologies for smartphones and wireless mobile devices in the area of network communications. The system is based on cloud networking and cloud computing utilizing Amazon Web Services.

26. Additional details of my background are set forth in my curriculum vitae, attached as Appendix A to this Declaration, which provides a more complete description of my educational background and work experience.

27. I am being compensated for my time at the rate of $400 per hour for my work. This compensation is in no way contingent upon the nature of my findings, the presentation of my findings in testimony, or the outcome of this proceeding.

28. The analysis below presents the technical subject matter described in the ’900 patent, as well as some background known in the art at the priority date of the ’900 patent. It also presents my opinions regarding the scope and patentability of the ’900 patent based on certain references that I considered.

IV. MATERIALS CONSIDERED

29. The analysis that I provide in this Declaration is based on my education and experience in the telecommunications and information technology industries, as well as the documents I have considered, including the ’900 patent 1101, which states on its face that it issued from a PCT application filed on January 8,1999. I understand that the PCT application claims benefit to a U.S. Provisional patent application with a filing date of January 9, 1998. For purposes of this Declaration, I have assumed January 9,1998 as the effective filing date for

the ’900 patent. I have reviewed, considered, and cited to the following documents in my analysis below:

Exhibit No.	Title of Document
1101	U.S. Patent No. 6,633,900 to Khalessi et al. (“the ’900 patent”)
1102	U.S. Patent No. 6,748,318 to Jones (“*Jones*”)
1103	U.S. Patent No. 5,715,905 to Kaman (“*Kaman*”)
1106	Exhibit A to Plaintiff Intellectual Venture II LLC’s Infringement Contentions, *Intellectual Ventures II LLC v. FedEx Corp.*, 2:16-cv-00980 (E.D. Tex., Jan. 17, 2017)

V. LEGAL STANDARDS

30. In forming my opinions and considering the subject matter of the ’900 patent and its claims in light of the prior art, I am relying on certain legal principles that counsel in this case explained to me. My understanding of these concepts is summarized below.

31. I understand that the claims define the invention. I also understand that an unpatentability analysis is a two-step process. First, the claims of the patent are construed to determine their meaning and scope. Second, after the claims are construed, the content of the prior art is compared to the construed claims.

32. I understand that a claimed invention is only patentable when it is new, useful, and non-obvious in light of the “prior art.” That is, the invention, as

defined by the claims of the patent, must not be anticipated by or rendered obvious by the prior art.

33. For purposes of this declaration, I have been asked to opine only on certain issues regarding the technology at issue, the level of ordinary skill in the art, the scope of the ’900 patent claims, and obviousness. I have been informed of the following legal standards, which I have applied in forming my opinions.

A. Claim Construction

34. I understand that the United States Patent and Trademark Office interprets claim terms of an unexpired patent based on the broadest reasonable interpretation in light of the patent’s specification. Thus, I have been informed that for each claim term construed in this proceeding, I should use the “broadest reasonable interpretation” that would have been understood by one of ordinary skill in the art when reading the specification and prosecution history of the ’900 patent at the time of the alleged invention of the ’900 patent.

B. Obviousness Under 35 U.S.C. §103

35. I have been advised that a patent claim may be unpatentable as obvious under 35 U.S.C. § 103 if the differences between the subject matter patented and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. I have also been advised that several factual inquiries underlie a

determination of obviousness. These inquiries include (1) the scope and content of the prior art; (2) the level of ordinary skill in the field of the invention; (3) the differences between the claimed invention and the prior art; and (4) any objective evidence of non-obviousness.

36. I also have been advised that combining familiar elements according to known methods and in a predictable way is likely to suggest obviousness when such a combination would yield predictable results.

VI. OVERVIEW OF THE '900 PATENT

37. The '900 patent describes a system and method for assigning and communicating work orders to field crew personnel. (Ex. 1101 at 2:20-24.) The systems and methods disclosed in the '900 patent may be used by businesses such as "utility companies," which "deploy numerous employees over a wide geographic area to service a dispersed infrastructure or client base." (*Id.* at 1:18-23.)

38. The disclosed system and method use both an enterprise computing system and at least one mobile field unit. (*Id.* at 2:24-25.) The enterprise computing system is a dispatch system, assigning and communicating work order assignments to field crew personnel "with minimum dispatcher/operator interference." (*Id.* at 3:38-49.) The field crews use the mobile field unit—a computing device such as a portable computer, a personal digital assistant (PDA), or similar device—to receive the work order assignments, gather information about the work order, and update the enterprise computing system regarding the status of the work order. (*Id.* at 3:42-46, 4:13-16, 41-44.)

39. To communicate data between the field crews and the enterprise computing system, the '900 patent describes using standard networking components and techniques that were widely available and well-known at the time of the '900 patent. For example, the '900 patent discloses using a wireless

communication network that supports terminal control protocol/internet protocol (TCP/IP). (*Id.* at 2:24-27, 3:55-4:4, 4:23-30.) As shown in Fig. 1 (below), the enterprise computing system 50 of the ’900 patent includes one or more servers 56, 60, 62, 64 or workstations 66 connected over a LAN 68 to a database 58 and a TCP/IP gateway 70. (*Id.* at 3:55-4:4.) The mobile field unit 72 includes a wireless radio modem 74 and communicates with the enterprise computing system 50 over the wireless communication network 54.

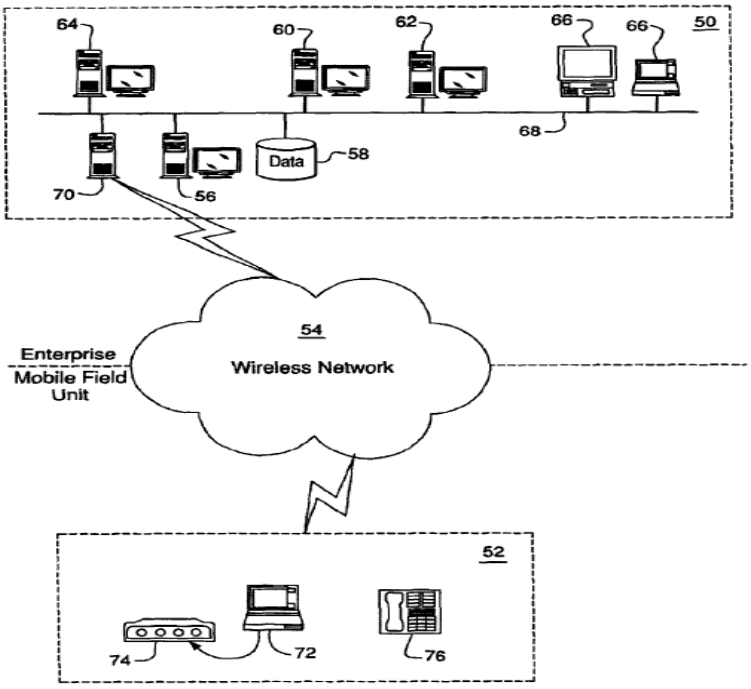


FIG. 1

40. The ’900 patent discloses using this system to perform a method for distributing work order assignments to field crews as shown in Fig. 5 (below). (*Id.* at 8:66-9:19.)

- The method includes updating a database on the enterprise computing system to indicate an assignment has been assigned to a field crew, after which the field crew is notified. (*Id.* at Fig. 5, steps 300, 302.)
- In response to the field crew inputting login data, the method includes verifying the field crew identity and notifies the field crew of a successful login. (*Id.*, steps 304-308).
- The method also includes presenting a list of assignments to the field crew and retrieving detailed assignment data in response to input by the field crew. (*Id.*, steps 308-312.)
- Finally, in response to the field crew identifying that an action was taken with regard to the assignment, the database is updated. (*Id.*, step 314.)

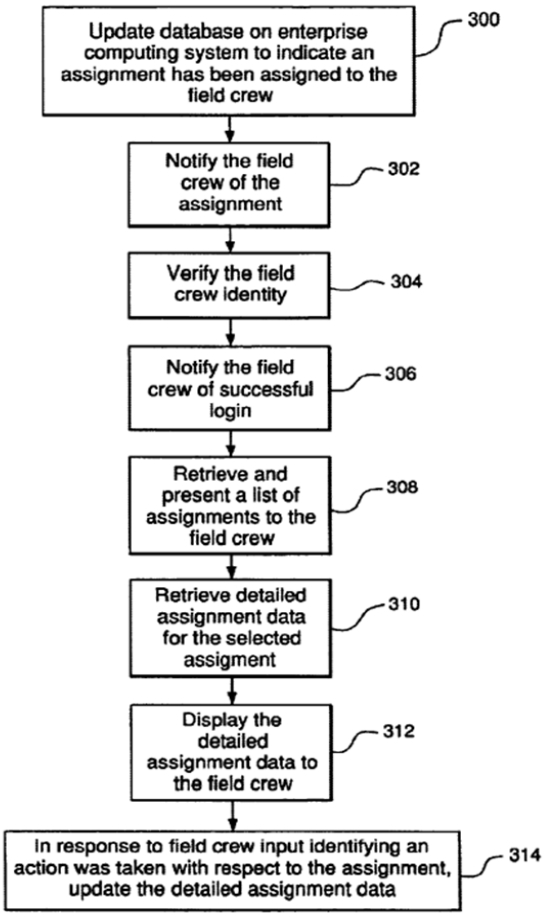


FIG. 5

41. Independent claim 1 of the ’900 patent captures this method of distributing work order assignment data to a field crew. While the ’900 patent describes embodiments where the enterprise computing system and mobile field unit communicate using a computer network and TCP/IP, claim 1 is not so limited. In fact, claim 1 does not at all specify or limit the communications medium through which the claimed steps are performed. Claim 1 recites:

1. A method for distributing work order assignment data to a field crew using a system having an enterprise computing system and at least one mobile field unit, comprising the following steps:

(A) updating a database on the enterprise computing system to indicate an assignment has been assigned to the field crew;

(B) notifying the field crew of the assignment;

(C) in response to the input of field crew login data, verifying field crew identity;

(D) notifying the field crew of successful login;

(E) retrieving and presenting a list of assignments to the field crew;

(F) in response to field crew input selecting an assignment from the list of assignments, retrieving detailed assignment data for the selected assignment;

(G) displaying the detailed assignment data to the field crew; and

(H) in response to field crew input identifying an action was taken with regard to the assignment, updating the detailed assignment data.

VII. PERSON OF ORDINARY SKILL IN THE ART

42. I am informed that patentability must be analyzed from the perspective of "one of ordinary skill in the art" in the same field as the patents-in-suit at the time of the invention. I am also informed that several factors are considered in assessing the level of ordinary skill in the art, including (1) the types of problems encountered in the art; (2) the prior art solutions to those problems; (3) the rapidity with which innovations are made; (4) the sophistication of the technology; and (5) the educational level of active workers in the field.

43. Based on my experience teaching, researching, designing, developing, and consulting, and considering the factors identified above, it is my opinion that a person of ordinary skill at the time of the alleged invention of the '900 patent would have held a bachelor's degree in electrical engineering, computer engineering, computer science, or the equivalent.

44. It is also my opinion that one at this skill level would have had at least two years of industry experience in the field of computer networking generally, and wireless networking or mobile communications specifically, or the academic equivalent thereof. Further, it is my opinion that one skilled in the art would have been familiar with the components, methods, and protocols used at the time of the alleged invention of the '900 patent to communicate between a mobile field unit and an enterprise computing system.

45. The disclosure of the ’900 patent supports my opinion. For example, in describing the embodiments, the ’900 patent explains that the enterprise computing system 50 and the mobile field unit 52 communicate using well-known protocols such as hypertext transfer protocol (HTTP) over TCP/IP. (Ex. 1101 at, 3:55-4:34, Figs. 1, 2).)

46. Moreover, the ’900 patent explains that the servers in the enterprise computing system can be connected using well-known local area network (LAN) technologies, and that the mobile field unit can be connected to the enterprise computing system via wireless networks, which were also well known. (*Id.* at 3:67-4:4, 4:47-5:10, Figs. 1, 2).).

47. In some embodiments, the ’900 patent explains that the enterprise computing system may return data to the mobile field unit in the form of a hypertext markup language (HTML) file. (*Id.* at Fig. 2 (“Downloaded HTML File” 92), Fig. 4 (same), 8:54-65.)

48. One skilled in the art would have been familiar with these well-known communication mechanisms and protocols discussed in connection with the embodiments of the ’900 patent.

49. As of the priority date of the application for the ’900 patent, which as discussed above, I have assumed is January 9, 1998, I was at least a person of ordinary skill in the art. I am also familiar with the knowledge of the person of

ordinary skill in the art as of the priority date of the ’900 patent. I am able to opine on how the person of ordinary skill in the art would have understood the disclosure and claims of the ’900 patent, the disclosures of the prior art, the motivation to combine the prior art, and what combinations would have been obvious to one of ordinary skill in the art.

VIII. CLAIM CONSTRUCTION

50. In preparing this declaration, I interpreted the claim terms of the ’900 patent under the “broadest reasonable interpretation” claim construction principles that I discussed above in the Legal Standards section.

IX. *JONES* IN VIEW OF *KAMAN* RENDERS OBVIOUS CLAIM 1

51. It is my opinion that claim 1 of the '900 patent is unpatentable based on U.S. Patent No. 6,748,318 to Jones ("*Jones*"), which I understand has been submitted as Exhibit 1102 in this proceeding, in view of U.S. Patent No. 5,715,905 to Kaman ("*Kaman*"), which I understand has been submitted as Exhibit 1103 in this proceeding. My specific opinions as to unpatentability are set forth below.

A. Overview of *Jones*

52. *Jones* discloses an advanced notification system and method for notifying users in advance of an impending vehicle arrival. (Ex. 1102 at 1:43-49.) This allows users to predict arrival times, avoid unnecessary waiting, and plan accordingly. (*Id.* at 1:56-65.) *Jones* states that its disclosure is useful for arriving buses, trains, delivery vehicles, vessels, and even individuals. (*Id.* at 1:43-49.) In the context of package delivery systems, customers are alerted of an impending delivery based on the location of the delivery vehicle. (*Id.*, Abstract.)

53. As shown in Fig. 2 (below), *Jones* discloses a system including a vehicle control unit (VCU) on each vehicle and a base station control unit (BSCU) that communicates with the VCUs. (*Id.* at 10:52-59.) The BSCU 14 coordinates communication between the VCUs 12 and customer devices 36, 36x. (*Id.* at 10:52-63.)

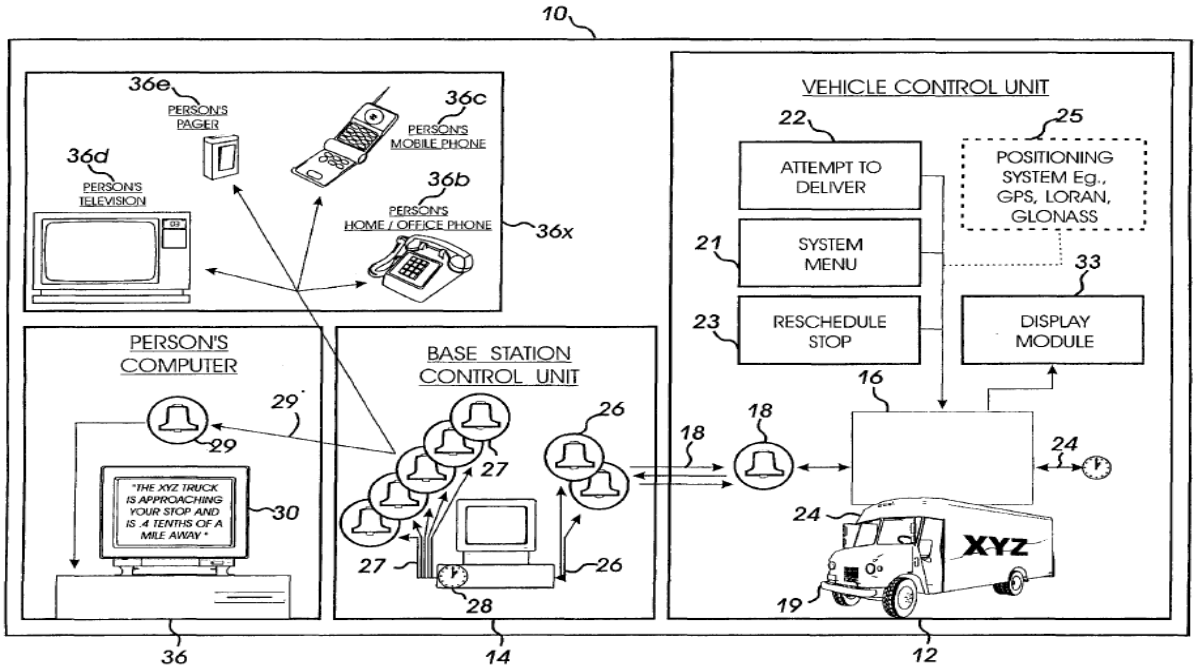


FIG 2

54. The VCU displays stop information to the driver in the field using a display module (33). (*Id.* at 19:53-57.) For example, as shown in Figure 41 (below), the VCU may display a route list of stops for the driver to make throughout the day. (*Id.* at 9:41-64, Figs. 40-43.) *Jones* also discloses that the BSCU can update the route list both prior to a driver starting his or her route when packages are added, and mid-route if new package pick-up requests are added. (*Id.* at 18:5-22.) Thus, the route list can be updated throughout the day and updates can be sent to the VCU. (*Id.* at 21:66-22:9.)

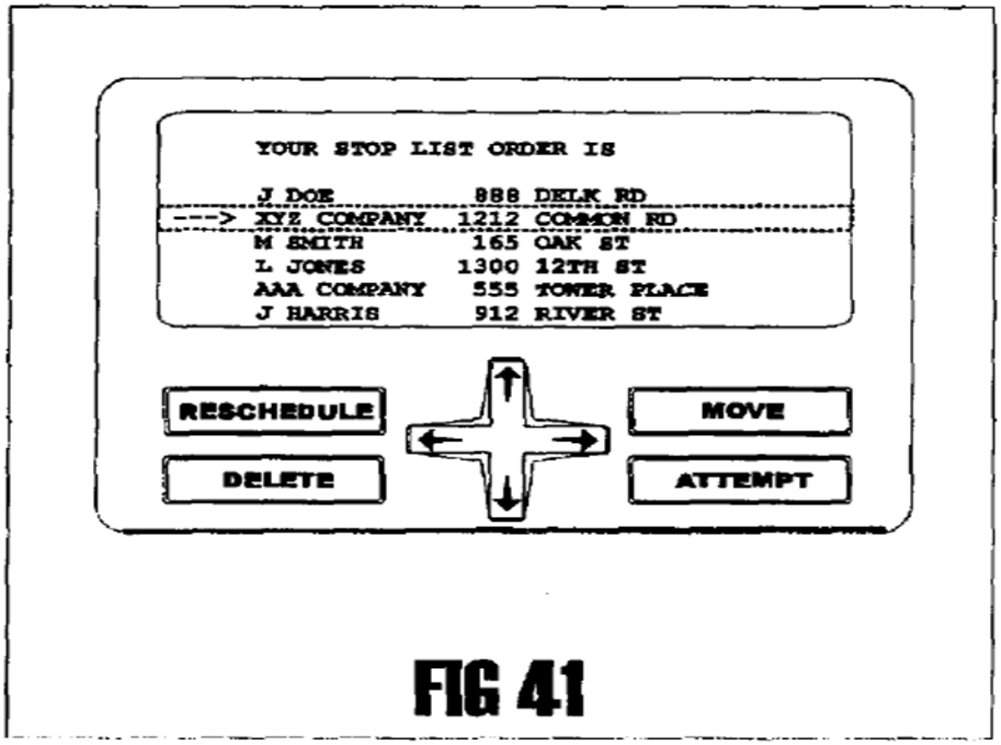
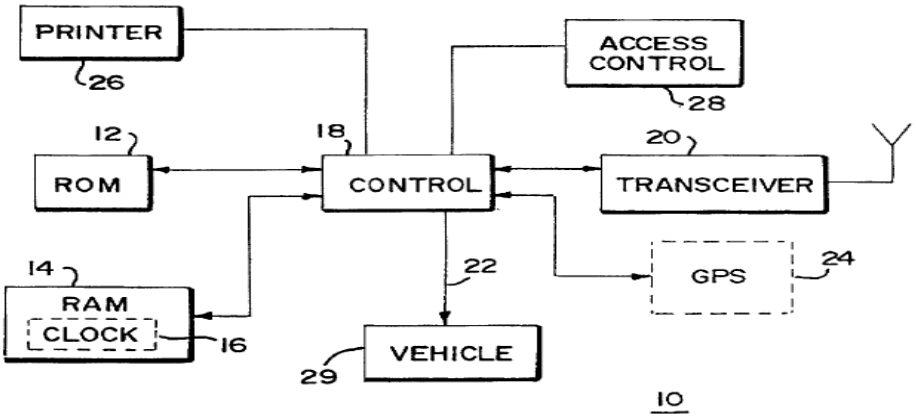


FIG 41

B. Overview of *Kaman*

55. *Kaman* discloses a vehicle access controller for "monitoring mobile vehicles[,] . . . collecting operational information of mobile vehicles[,] and securing such vehicles against unauthorized use." (Ex. 1103 at 1:7-10.) *Kaman* discloses use of its system in small and large organizations, including those in which "one operator is assigned to a vehicle," or where "many operators may use a given vehicle within a given time period without any one operator being assigned to any given vehicle." (*Id.* at 1:37-45.) As shown in Fig. 1 (below), the controller of *Kaman* includes a mobile vehicle data collection unit (10) including "a transceiver 20 for transmitting vehicular information from the data collection unit 10 to a central data collection unit computer 38." (*Id.* at 2:45-51.)

FIG. 1



56. To ensure only authorized operators are using a particular vehicle, the data collection unit employs an access control device to obtain credential information from the operator. (*Id.* at 6:66-7:10.) The access control device is "any device structured for determining indicia of identity of a prospective vehicle user (e.g., a keyboard, a magnetic card reader, a key card reader, a fingerprint scanner, or a retinal scanner)." (*Id.*) *Kaman* further discloses that "[w]here the access control device 28 is a keypad or card reader, the indicia of identity may be an access code." (*Id.*) The indicia of identity of a prospective user are either transmitted to a central station or processed locally to be compared with known indicia of identity of authorized users. (*Id.* at 2:17-22, 7:24-31.)

C. Rationale and Motivation to Combine *Jones* and *Kaman*

57. In my opinion, a person of ordinary skill in the art would have been motivated to combine *Jones* and *Kaman* for the purposes of controlling access to

Jones's delivery vehicles and systems. *Jones* teaches a system with VCUs on each vehicle, where the system can be deployed in a delivery service organization. (Ex. 1102 at 2:33-45.)

58. *Kaman* teaches a vehicle access controller for preventing unauthorized use of a vehicle in small and large organizations. (Ex. 1103 at 1:7-10, 37-45.) It would have been obvious to one skilled in the art to combine the vehicle system of *Jones* with the vehicle access controller of *Kaman* for the purposes of validating an authorized user before granting access to a vehicle or VCU.

59. *Jones* discloses that the drivers may be part of a commercial delivery company. (Ex. 1103 at 2:33-45.) One skilled in the art would have been motivated to determine the identity of a driver and verify his or her credentials before allowing the driver to access the VCU and communicate with the BSCU.

60. *Kaman* provides a vehicle access controller that verifies the identity of a driver by using an indicia of identity and an access control device. (Ex. 1102 at 7:1-10.) Combining *Kaman* and *Jones* would have been obvious because it would have been the combination of two known elements (the access control device of *Kaman* with the vehicle or VCU of *Jones*) to yield the predictable and desired result of preventing unauthorized access to the vehicle and the BSCU.

61. One skilled in the art would have been further motivated to make this combination in the context of an organization with one or more delivery vehicles

(as disclosed in *Jones*), in order to limit access to those vehicles and associated VCUs to only authorized users. The organization would benefit from limiting access to the vehicles and VCUs to only employees of the organization, or to even a subset of the employees of the organization.

62. One example of such benefit would be increased security over the system. For example, the combination would allow an organization to ensure that only authorized employees were allowed to access the vehicles and/or system. Such precautions would reduce the chance of theft or damage to the vehicles or tampering with the system.

63. As another example, the organization would benefit from increased control over the system. For example, if the organization is a delivery company, the company may have different classes of delivery vehicles. Each driver may only be qualified to drive vehicles of a particular class. One skilled in the art would have been motivated to combine *Jones* and *Kaman* to allow the organization to ensure that a particular driver only had access to vehicles that the driver is qualified to operate.

64. One skilled in the art also would have been motivated to add *Kaman*'s security features to *Jones* because *Jones* recognizes the importance of system security in related contexts. For example, *Jones* discloses that a customer can establish notification preferences using software resident on his or her personal

computer or via an internet website. (Ex. 1102 at 36:16-26.) When a notification is requested, the "computer address" of the user is registered so that only one computer may be used to receive notifications. (*Id.* at 36:29-37; *see also* Fig. 30 (stating "Notice - You May ONLY Subscribe From The Computer Address You Are Using Now!").) *Jones* states that "this allows the advance notification system to have a level of security." (*Id.*)

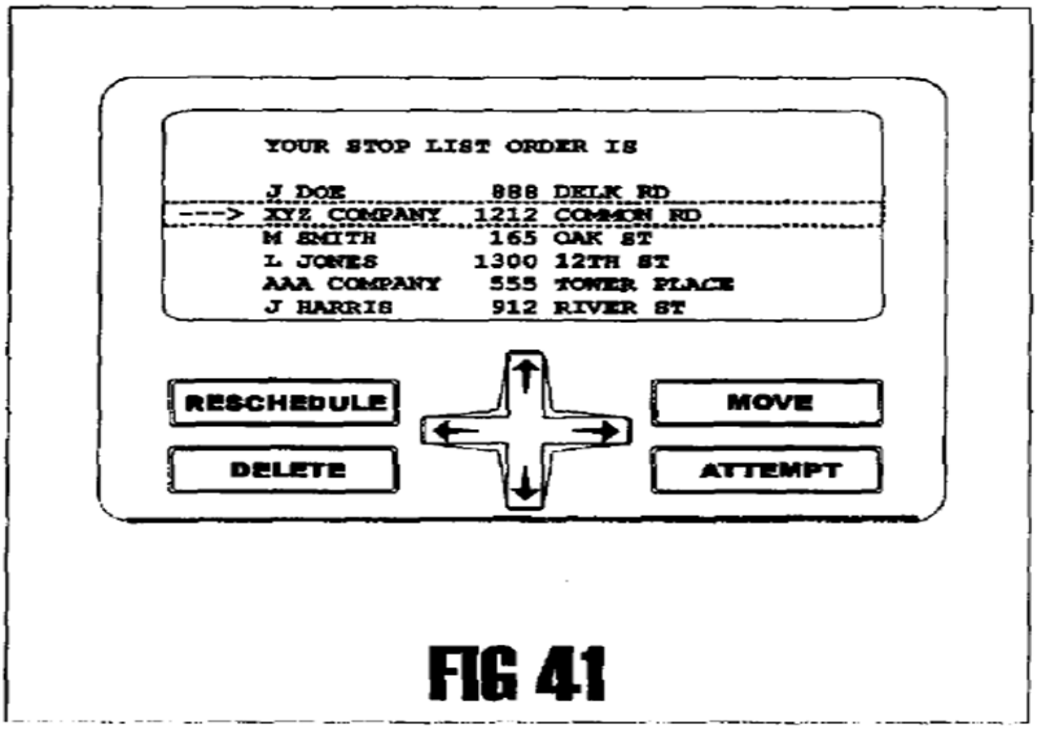
65. *Jones*'s disclosure of the need for security in one context would suggest to one skilled in the art that security is important to its notification system. Moreover, one skilled in the art would have been prompted to consider other forms of security for the notification system to ensure only authorized users have access, as I discussed above. This suggestion would have led one of ordinary skill to modify *Jones* and combine *Jones* with the access controller of *Kaman*. Doing so would have been nothing more than a combination of known elements based on the suggestion provided in the prior art.

D. The Combination of *Jones* and *Kaman* Teaches Each Element of Claim 1

1. "A method for distributing work order assignment data to a field crew"

66. In my opinion, *Jones* teaches a method for distributing work order assignment data to a field crew. *Jones* discloses a system including a VCU and BSCU that communicate to coordinate a "route stop list" for a driver throughout

the day. (Ex. 1102 at Abstract.) *Jones* refers to the "route list" also as a "stop list" or "delivery list." (*See* Ex. 1102 at 9:41-64 ("route list"), Figs. 41-43 ("stop list"), 33:39-61 ("delivery list" and "stop list").) The VCU displays the route stop list to the driver using a display, such as the one shown in Figure 41, reproduced below. (*Id.* at 9:41-64, Figs. 40-43.)



67. *Jones* discloses that the BSCU updates and optimizes the route stop list as packages are added to the vehicle and as stops are added to a driver's route. (*Id.* at 33:39-55, 17:63-18:11.) The BSCU updates the route stop list both prior to a driver starting his or her route when packages are added and mid-route if new requests to pick up packages are added. (*Id.* at 18:5-22.) The BSCU also optimizes the route stop list by organizing it using both optimization software and driver

input. (*Id.* at 33:45-34:4.) The route stop list is therefore updated throughout the day and updates may be sent to the driver's VCU. (*Id.* at 21:66-22:9.)

68. One skilled in the art would consider a route stop list to be "work order assignment data" within the context of the '900 patent. Each stop is a work order assignment that a driver must carry out (e.g., drive the vehicle to that location and pick up or deliver a package). This matches the '900 patent, which describes a work order generally as "any type of description of a particular task." (Ex. 1101 at 3:38-39.)

69. In addition, one skilled in the art would have considered adding stops to the route and/or optimizing a list of stops, either before the route begins or during the route, to be "distributing work order assignment data to a field crew."

70. I understand that the Patent Owner has urged a similar interpretation by alleging that FedEx uses a method for distributing work order assignment data to a field crew by providing "couriers" and "truck delivery drivers" with "information regarding its package deliveries." (Ex. 1106 at 3.) *Jones*'s distribution of stops in a route stop list discloses distributing work order assignment data to a field crew under Patent Owner's own interpretation.

2. "using a system having an enterprise computing system and at least one mobile field unit, comprising the following steps"

71. *Jones* discloses using a system having an enterprise computing system and at least one mobile field unit. *Jones* discloses an advanced notification system (e.g., a system) that includes delivery vehicles with onboard VCUs (e.g., at least one mobile field unit), each communicating with the BSCU (e.g., an enterprise computing system). (Ex. 1102 at 10:52-64.) The VCUs communicate with the BSCU (*id.*), to perform the steps discussed in the analysis that follows.

72. In my opinion, one skilled in the art would consider the VCU to be or include a "mobile field unit" within the context of the '900 patent. *Jones* discloses in reference to Fig. 11 (below), that the VCU is "a compact unit with a generally rectangular housing that is mounted preferably on or in front of the dashboard of the vehicle 19 in view of and within reach of the vehicle driver." (Ex. 1102 at 14:7-11.) *Jones* further discloses that the VCU includes a microprocessor controller 16, display (LCD) module 33, a mobile telephone transceiver 18, and user controls 21a for making inputs into the VCU. (*Id.* at 6:55-67, 10:66-11:22, 14:7-38.)

73. The VCU displays information to the driver through the display module 33, and the driver can communicate with the BSCU via the user controls 21a. (*Id.* at 12:30-39, 13:47-55.) *Jones* discloses using wireless networks for the

VCUs to communicate with the BSCU, including cellular networks. (*Id.* at 11:4-12.)

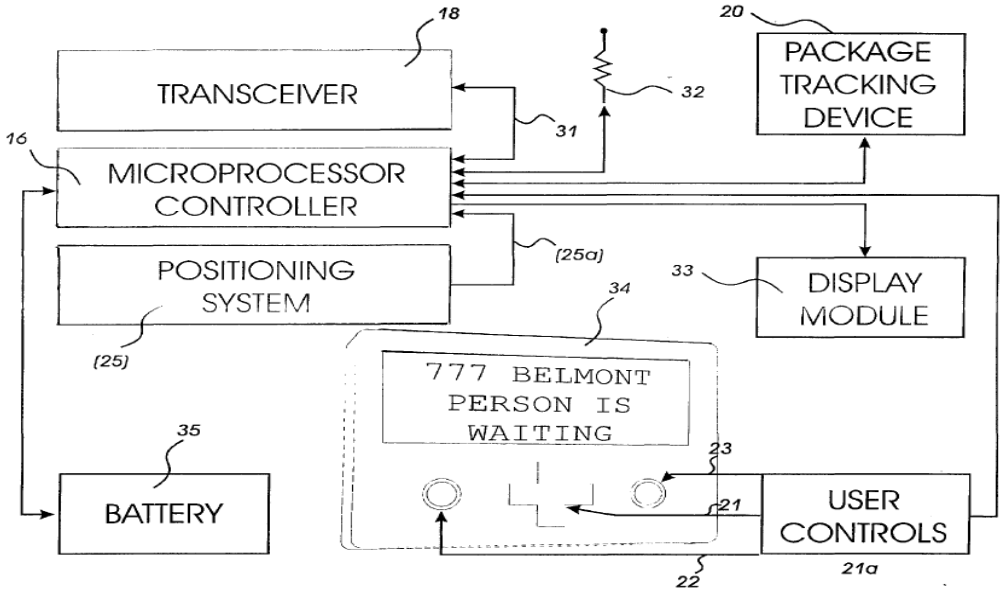


FIG 11

74. Similar to *Jones*'s disclosure, the '900 patent describes the mobile field unit as a "portable computer, a personal digital assistant (PDA), or similar device." (Ex. 1101 at 4:13-16.) One skilled in the art would consider *Jones*'s VCU, a small computer with a microprocessor controller, display, mobile telephone transceiver, and user controls (Ex. 1102 at 6:55-67, 10:66-11:22), to be a "portable computer . . . or similar device." Both are portable, include inputs and a display, and both communicate with a backend system while mobile field crews (e.g., delivery personnel, etc.) are in the field.

75. In my opinion, one skilled in the art also would have considered the BSCU to be an "enterprise computing system" within the context of the '900

patent. *Jones*'s BSCU "may be implemented using any conventional computer with suitable processing capabilities." (*Id.* at 14:41-50.) The BSCU communicates with the VCUs and customer computers over a network, including "a computer network operated by an Internet service provider." (*Id.*) As shown in Fig. 10 (below), *Jones* discloses several different modules maintained by the BSCU, including a "Route List with Order of Delivery (RL)," "Vehicle Location Data Base (VLDB)," and a "Mapping Software Data Base (MSDB)." (*Id.* at 15:37-67, 16:57-64.) The route stop list (RL) is created when addresses from package data are uploaded to the BSCU. (*Id.* at 25:57-67.)

76. The sequence of addresses is optimized by the BSCU to create the route stop list. (*Id.* at 17:63-18:22, 33:39-60.) Using this data in combination with the VLDB and MSDS, the BSCU tracks a vehicle's progress along its route stop list. (*Id.* at 19:58-20:10.) The BSCU uses this data to send customers notice of impending deliveries. (*Id.* at 15:6-10.)

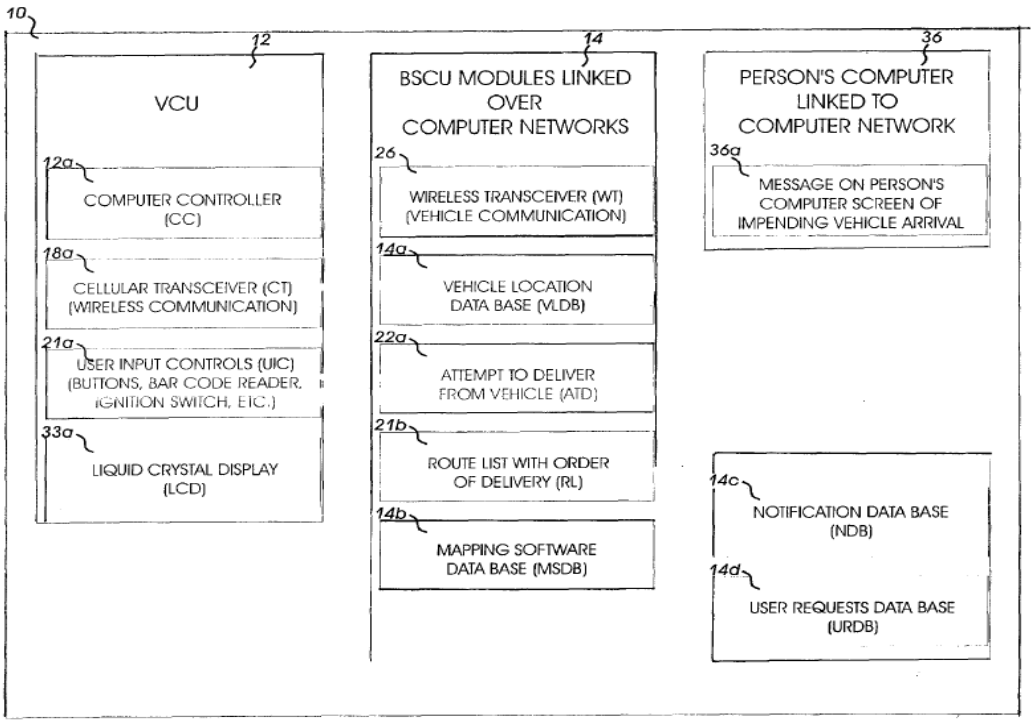


FIG 10

77. This disclosure in *Jones* is similar to the '900 patent's disclosure of an enterprise computing system that includes one or more servers or workstations connected in a computer network, fields requests and provides data regarding work orders. (Ex. 1101 at 3:55-67.) Thus, one skilled in the art would have understood *Jones*'s BSCU to disclose an enterprise computing system.

78. Moreover, I understand that Patent Owner has alleged that FedEx uses an enterprise computing system based on its assertions that FedEx's system "log[s] information regarding its package deliveries" and "manage[s] people, packages, vehicles, and weather scenarios in real time." (Ex. 1106 at 3.) In my opinion, *Jone*'s BSCU is an enterprise computing system under Patent Owner's apparent

interpretation because the BSCU logs information regarding package deliveries and manages people, packages, and vehicles.

3. "(A) updating a database on the enterprise computing system to indicate an assignment has been assigned to the field crew"

79. In my opinion, *Jones* discloses this feature. *Jones* discloses that the route stop list is maintained in a database on the BSCU. For example, *Jones* discloses that "for the BSCU to determine notification time, distance, location on a map, or broadcast the delivery vehicle's next stop, the BSCU should store the driver's route in its data base and/or receive next stop information from the VCU or other stored means." (Ex. 1102 at 12:27-31 (emphasis added).)

80. Similarly, *Jones* explains that addresses for each package to be delivered are "scanned into a database program" and "recorded in the BSCU" when the vehicle stops for each vehicle are being programmed. (Ex. 1102 at 17:63-18:11.) Then, if a customer enters a request for delivery information, the BSCU can use the "actual route list from each vehicle 19 stored in the BSCU 14" to determine when the package will likely be arriving. (Ex. 1102 at 26:1-15.) Figure 14, reproduced below, shows another "example of a route list," including a list of assignments (Ex. 1102 at 7:6.) Therefore, *Jones* discloses maintaining a route stop list (e.g., assignments) in a database on the BSCU.

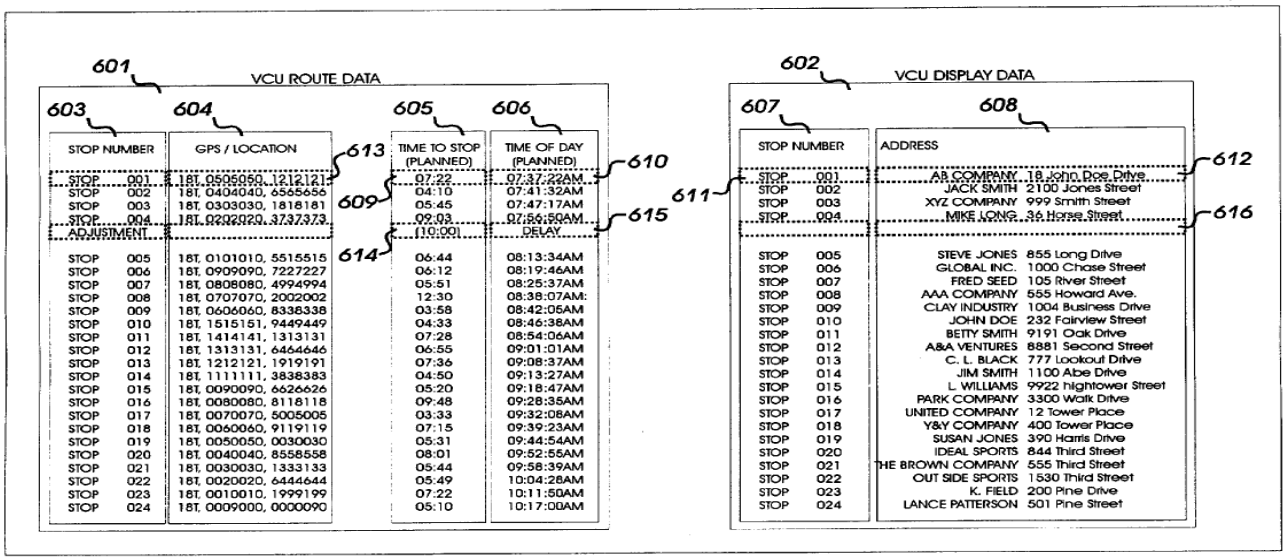


FIG 14

81. As discussed above in Section IX.D.1, the BSCU updates and optimizes the route stop list when packages are added to a vehicle and as stops are added to a driver's route. (*Id.* at 33:39-34:4, 17:63-18:22.) The route stop list is therefore updated throughout the day and updates may be sent to the driver's VCU. (*Id.* at 21:66-22:9.)

82. Because *Jones* discloses that the route list is maintained in a database on the BSCU, and because the route list can be updated mid-route when new stops are added, *Jones* discloses "updating a database on the enterprise computing system [e.g., the BSCU] to indicate an assignment [e.g., a stop] has been assigned to the field crew [e.g., a vehicle operator]." In particular, one skilled in the art would have understood that *Jones*'s disclosure of adding "[a]dditional vehicle 19 stops . . . when requests to pickup [sic] packages are received," would entail

updating the database in the BSCU to indicate that a pickup (assignment) has been assigned to the driver associated with vehicle 19.

4. "(B) notifying the field crew of the assignment"

83. In my opinion, *Jones* discloses notifying a field crew of an assignment by updating the VCU route stop list with a new request for package pickup. While *Jones* discloses that the route stop list may be populated on the VCU and displayed to the driver after being loaded onto the vehicle, *Jones* also discloses that additional pickups may be sent to the driver mid-route and that the route stop list is updated accordingly. (*Id.* at 33:38-57, 22:4-9.)

84. In particular, *Jones* states that "requests for package pickups are processed in the BSCU 14 and sent to the appropriate vehicle VCU 12 and scheduled into the drivers' list of stops (FIG. 41)." (*Id.* at 22:4-9.)

85. When a new pickup is requested by the BSCU, the driver can operate the VCU to acknowledge the new stop or request a rescheduling. (*Id.* at 21:62-22:3.) *Jones* discloses that the driver can be notified of the "new entry or route update" with "an audible sound, such as a buzzer, tone, or different voice recordings for announcing each event without the need for the driver's eyes to look at the VCU 12 display when driving." (*Id.* at 21:62-22:3.) Figure 42 (reproduced below) shows the VCU displaying a driver's route stop list, including names and addresses of stops along the route. (*Id.* at 9:52-57.)

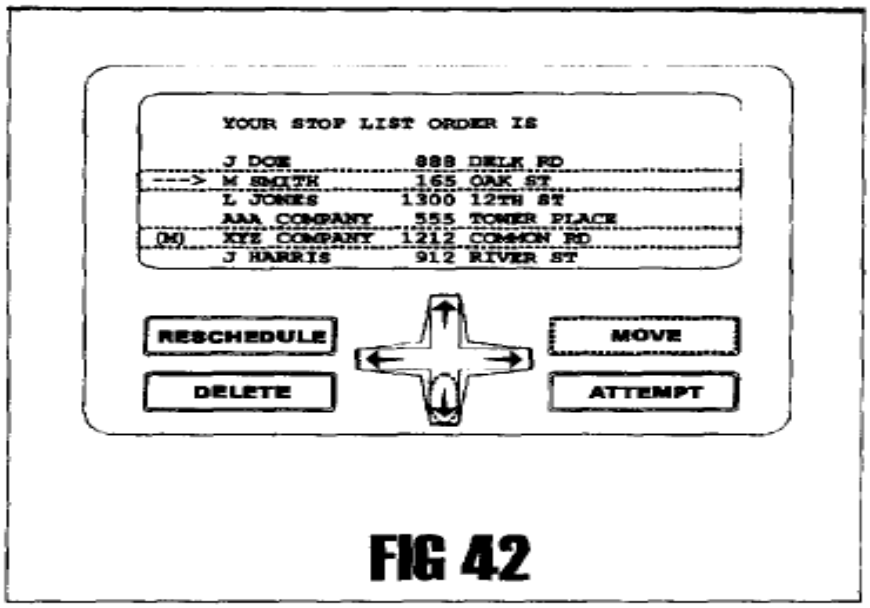


FIG 42

86. Additionally, *Jones* discloses that additional package deliveries can be given to a driver after he or she ends a route, upon which the driver is given a notification via the VCU. (*Id.* at 25:48-57.) *Jones* states that "if the delivery list has been completed, then the VCU 12 may contact the BSCU 14 and receive additional information to display on the VCU's LCD 155a that prompts the driver to stop at a receiving dock for more packages . . . ." (*Id.* at 25:48:54.) Figure 44 (reproduced below) shows the steps for completing a route list and receiving additional instructions to pick up more packages. (*Id.* at 9:67-10:3.) Therefore, the BSCU notifies the driver of a new assignment (e.g., a new stop or pickup) by displaying

messages on the VCU and with audible notifications.

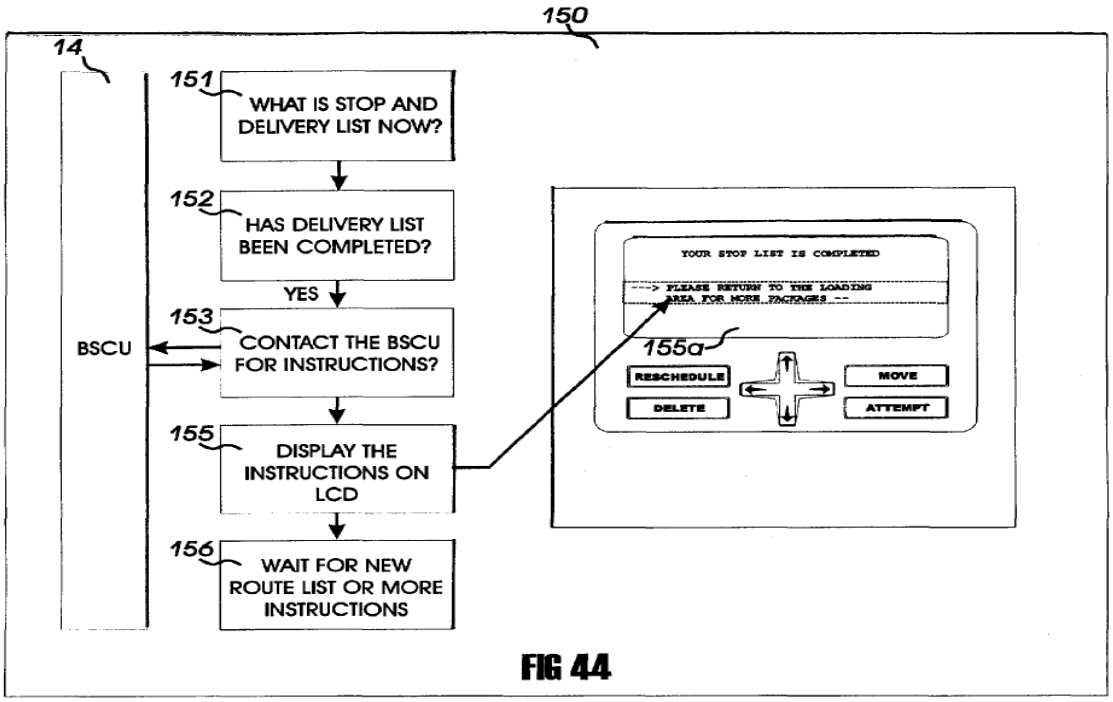


FIG 44

87. Moreover, I understand that Patent Owner has alleged that FedEx notifies a field crew of an assignment using a "beep" and then displaying a message on the screen so the driver can read it. (Ex. 1106 at 5.) In my opinion, the BSCU and VCU operate in the same manner, using an audible notification and also displaying messages on the VCU display. Therefore in my opinion, *Jones* discloses notifying the field crew of the assignment under the Patent Owner's apparent interpretation of the term.

5. "(C) in response to the input of field crew login data, verifying field crew identity"

88. In my opinion, *Jones* and *Kaman* teach this feature. *Jones* discloses performing an initialization process between the VCU and the BSCU prior to the

driver starting his or her route. (*Id.* at 17:63-18:25, 19:34-57, 33:39-61.) During this period, packages may be scanned as they are loaded into the vehicle, and the scanned data may be transmitted to the BSCU for incorporation into a route stop list. (*Id.* at 33:39-61.)

89. While *Jones* does not expressly disclose the driver inputting login data to access the VCU, to communicate to the BSCU, or to enter a delivery vehicle/vehicle facility, one skilled in the art would have found it obvious to require a driver to provide such login data (e.g., during the initialization process) in order to verify the driver's identity and ensure that only authorized individuals are accessing the system/vehicle.

90. *Kaman*, in the same field as *Jones* (e.g., organizations involving drivers and vehicles), expressly discloses verifying the identity of a field crew in response to the input of field crew login data. *Kaman* discloses a vehicle access controller that is used to monitor mobile vehicles and prevent unauthorized use/access. (Ex. 1103 at 1:7-10.)

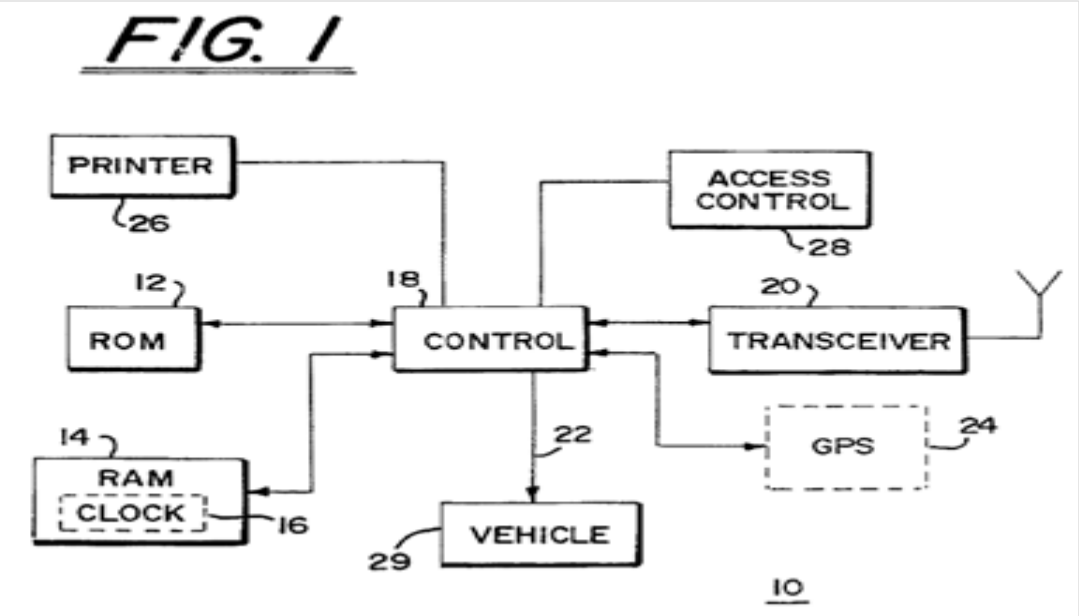
91. *Kaman*'s controller is part of a "data collection unit 10" that is mounted within a vehicle to control access and ensure only authorized operators use the vehicle. (*Id.* at 2:55-62.) *Kaman* controls access by verifying an "indicia of identity of a prospective vehicle user." (*Id.* at 2:17-22.) The indicia of identity are

processed either locally at the vehicle or remotely at a central computer. (*Id.* at 2:27-32.)

92. As described above in the Overview of *Kaman* section, prospective operators enter their indicia of identity using "a keyboard, a magnetic card reader, a key card reader, a fingerprint scanner, or a retinal scanner," and the indicia of identity may be an access code or a biometric feature read by the scanners. (*Id.* at 7:1-8.)

93. Upon the access control device receiving the indicia of identity, *Kaman*'s system compares the indicia of identity to a record stored locally on a vehicle system or stored on a central computer remote from the vehicle. (*Id.* at 7:11-38.) Where the authorization is requested from the remote central computer, the "controller 18 transfers the indicia of identity from the access control device 28 to the central computer 38 through the wireless data link provided by the two-way transceivers." (*Id.*) Where authorization is performed locally, "the central computer 38 periodically downloads files on authorized users . . . . [and] the local controller 18 compares the indicia of identity with the files of authorized users." (*Id.*) Using either remote or local authorization, the identity of the perspective vehicle operator is verified.

94. Figure 1 (below) illustrates the data collection unit (10) and access control device (28) that receives and the indicia of identity.



95. It would have been obvious to one skilled in the art to combine the notification system of *Jones* with the vehicle access controller of *Kaman* for the purposes of validating an authorized user before granting access to a vehicle or to any system or component within the vehicle (e.g., the VCU). *Jones* discloses a VCU and BSCU that communicate and coordinate stops along a driver's route. (Ex. 1102, Abstract.) In some embodiments of *Jones*, the drivers are part of a commercial delivery company. (*Id.* at 2:33-45.) An organization employing such a system would desire a form of user authentication before granting access, both to the system and to its vehicles. *Kaman* provides a vehicle access controller that verifies an indicia of identity of perspective users and limits access to the vehicle accordingly. (Ex. 1102 at 7:11-38.)

96. Motivated to control and monitor access to its system and vehicles, one skilled in the art would have found it obvious to combine the teachings of *Jones* and *Kaman*. *See* Section IX.C. Doing so would require nothing more than applying a known technique (identify verification as disclosed in *Kaman*) to a known device (*Jones*'s VCU) in order to achieve the predictable and desired result of increased security and control (limiting access) for *Jones*'s vehicles and system.

6. "(D) notifying the field crew of successful login"

97. In my opinion, *Kaman* discloses notifying the field crew of a successful login by granting access to the prospective vehicle operator. *Kaman* discloses that when the central computer finds a match after "compar[ing] the indic[i]a of identity with each file of authorized users," the central computer "responds with an access grant . . . returned through the wireless data link." (*Id.* at 7:20-24.) The grant of access is returned to the vehicle access controller, which grants the operator access to the vehicle by unlocking the vehicle doors or starting the vehicle's engine. (*Id.* at 7:33-39.)

98. Conversely, when access is not granted or the system identifies a lost or stolen an access code, the "central computer 38 may deny access by not responding to the access request transmitted by the vehicle controller 10, or may respond with a lock-out command to an existing vehicle security system." (*Id.* at 7:58-64.)

99. *Kaman* thus contemplates granting access if verification is successful or conversely taking no action/activating an alarm if access is denied. One skilled in the art would consider *Kaman*'s granting access after input of indicia of identity to be notification of a successful login. Similarly, one skilled in the art would consider *Kaman*'s denial of access to be notification of an unsuccessful login.

100. In my opinion, *Kaman*'s grant of access to a vehicle discloses "notifying the field crew of a successful login," as recited in step D of claim 1. Nonetheless, to the extent the Board construes this step to require further notification of a successful login to the enterprise computing system, in my opinion it would have been obvious to modify *Kaman*'s system, which controls access to the vehicle to instead control access to a system in the vehicle, such as *Jones*'s VCU.

101. This would have been obvious for all the reasons discussed above. *See* Sections IX.C, IX.D.5. For example, an organization such as the delivery companies disclosed in *Jones* would have been motivated to limit and control access not only to their vehicles, but also to the systems and components included in those vehicles.

102. Thus, one skilled in the art would have found it obvious to control access to *Jones*'s VCU using the identity verification methods disclosed in *Kaman*. In doing so, one skilled in the art would have found it obvious to notify the user of

a successful log in by granting the user access to the VCU and its functionality, in the same way that *Kaman* notifies the user of a successful login by granting the user access to the vehicle.

103. In this regard, I note that while the '900 patent includes an embodiment where a "success HTML page" is generated to notify the field crew of a successful login, (ex. 1101 at 9:44-63), claim 1 is not so limited and simply requires "notifying" of a successful login, without regard to the precise form or content in the notification.

104. I also understand that the Patent Owner has asserted that FedEx practices this limitation by simply granting access to the system: "FedEx notifies the field crew of a successful login by allowing the field crew to access the functions on the on the PowerPad and/or MC9500 device." (Ex. 1106 at 10-11.) In my opinion, the combination of *Jones* and *Kaman*, which as discussed above would provide the user with access to *Jones*'s VCU upon successfully entering login information, discloses "notifying the field crew of a successful login" as the Patent Owner appears to be interpreting it.

105. Even if the Board were to decide in this case that "notifying" in the context of claim 1 requires more than simply granting access to the system, it is my opinion that *Jones* and *Kaman* render obvious displaying a visual notification of a successful login. For example, it would have been obvious to include on the VCU

of *Jones* a notification message that says "Welcome [Employee Name]." *Jones* explicitly states that VCU messages can be displayed to the driver." (Ex. 1102 at 11:40-47.) Therefore it would have been obvious to include in an initial message on the VCU a notification of successful login. Such notifications were commonplace and well known at the time of the '900 patent.

106. Moreover, *Kaman* states that "short messages may also be delivered to authorized users through the printer 26 of a particular vehicle 29. The particular vehicle 29 to which the message i[s] delivered is determined by the matched indicia of identity previously entered by a prospective user." (Ex. 1103 at 7:65-8:2.) Therefore, *Kaman* discloses sending messages to authorized users over the wireless data link that can notify the operator. (*Id.* at 8:12-19 (stating that "[w]hen the proper vehicle is identified, the central computer 38 transmits the message to the vehicle controller 10 which then prints out the message via the printer 26 for the benefit of the user").)

107. Given that *Kaman* discloses providing access to a vehicle based on indicia of identity, as well as sending authorized users messages via an on-board printer, it would also have been obvious to one skilled in the art to combine the message capability of *Kaman* with the VCU display of *Jones* to notify a vehicle operator of a successful login to the vehicle system via the VCU display.

108. *Jones* discloses that VCU messages can be displayed to the driver, including "are you starting your route?" and "would you like to reschedule this delivery for today?" (Ex. 1102 at 11:40-47.)

109. Therefore, it would be obvious to use this well-known messaging functionality disclosed in *Jones* and *Kaman* to display a notification of successful login in an initial welcome message to the technician. These types of notifications were commonplace and well known at the time of the '900 patent, and would have provided an added user interface feature to confirm to the technician that the login was successful. Further, by displaying the technician's name in the welcome message, the technician would be able to confirm that the system recognized him or her correctly.

7. "(E) retrieving and presenting a list of assignments to the field crew"

110. In my opinion, *Jones* discloses this feature by displaying stops along a driver's daily route stop list using the VCU. (Ex. 1102 at 9:41-57, 20:53-57.) As shown in Fig. 42, reproduced below, the VCU displays stops on a driver's route stop list. (*Id.* at 9:52-58 (stating that the VCU is "displaying the vehicle's route list order with next stop/delivery to be made").) The driver's route stop list is a list of stops for package delivery or pickup (e.g., assignments), which are retrieved either

from the BSCU or the VCU during initialization and presented to the operator via the VCU. (*Id.* at 33:39-55, 31:4-27.)

111. In my opinion, one skilled in the art would have considered *Jones*'s retrieving an optimized route stop list or new stop/pickup from the BSCU, or retrieving a route stop list from the VCU during initialization and displaying the route stop list to the operator to be "retrieving and presenting a list of assignments to [a] field crew."

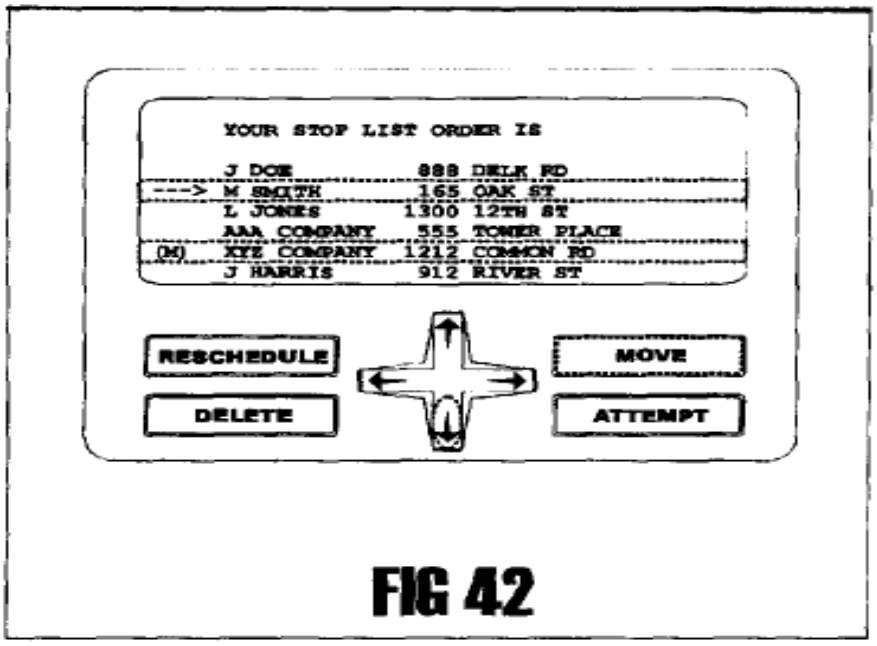
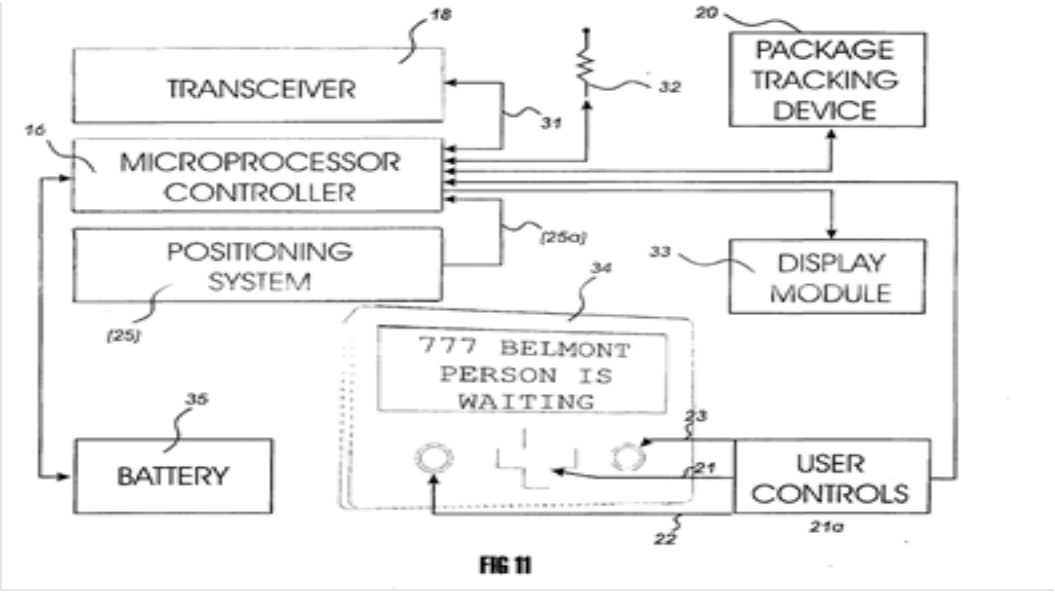


FIG 42

8. "(F) in response to field crew input selecting an assignment from the list of assignments, retrieving detailed assignment data for the selected assignment"

112. In my opinion, *Jones* teaches this feature. *Jones* describes, with respect to the example VCUs shown in Figures 11 and 40-43 (reproduced below)

that the operator can use the VCU to select stops (e.g., assignments) from among the operator's route stop list. For example, with respect to Figure 11, *Jones* discloses that the operator can make selections on-screen using a "system menu switch 21 [that] operates by scrolling upward and downward through options and selecting an option by pressing left or right on the control knob." (*Id.* at 13:36-38.)



113. *Jones* also discloses using the VCU controls to select a stop (e.g., an assignment), and request rescheduling of the stop, delete or move the stop, or alert the BSCU that an attempt at delivery was made. (*Id.* at 9:41-65, 11:36-12:5.) Figures 40-43 reproduced below illustrate route stop lists with such modifications. (*Id.* at 21:62-22:9.)

114. For example, Figure 40 shows the next stop for a driver; Figure 41 shows a route stop list with the next stop highlighted; Figure 42 shows the route

stop list with a stop that has been moved, as indicated by the "(M)" on the left side; and Figure 43 shows the route stop list with a stop that has been rescheduled from an attempted delivery, as indicated by the "(AR") on the left side. (*Id.* at 9:42-65.)

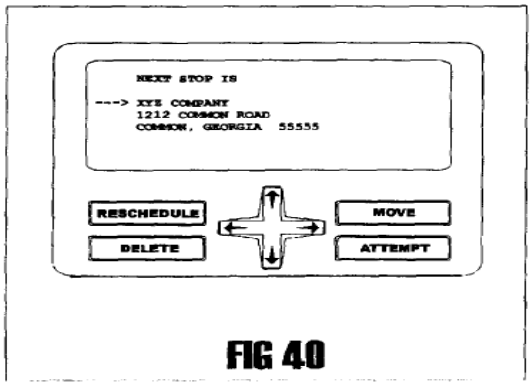


FIG 40

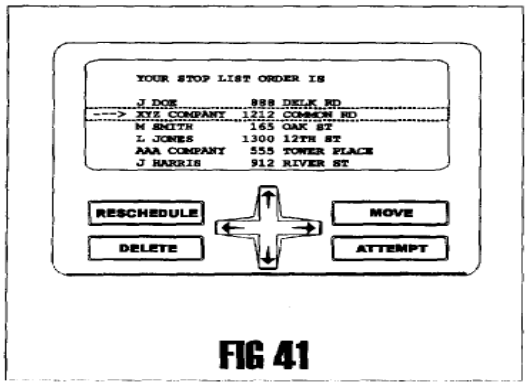


FIG 41

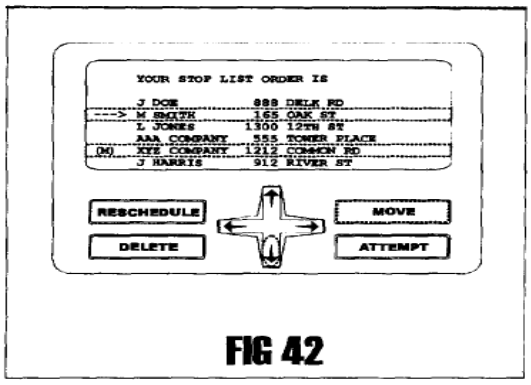


FIG 42

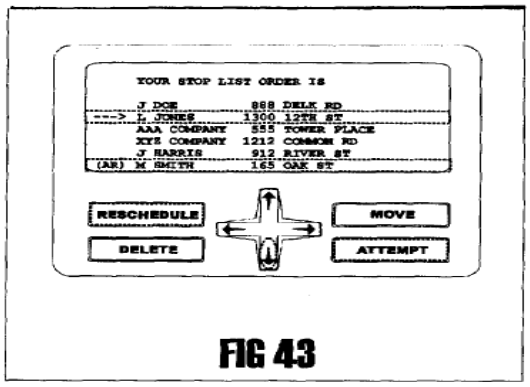


FIG 43

115. Finally, *Jones* discloses that the VCU may display information related to the stop in text format (Fig. 40) or as a "map with highlighted roads to the next stop or actual directions." (*Id.* at 9:41-46.) *Jones* discloses that the "additional directions with or without map displays . . . can be activated by the drivers'

input . . . .” (Ex. 1102 at 22:25-38.) One skilled in the art would consider the textual information and mapping of the stop to be “detailed assignment data.”

116. Given *Jones*’s disclosure of a driver interacting with the VCU to select items, such as a stop along the route stop list, and of providing additional directions with map displays based on the driver’s input, *Jones* teaches or would have at least rendered obvious retrieving the additional directions and/or map information in response to a driver selecting a stop from the list. One skilled in the art further would have understood that the driver in *Jones* would make such a selection given *Jones*’s express disclosure of scrolling through the list and then pressing left or right on the control knob to make a selection.

117. It would have been obvious to one skilled in the art to retrieve and display the additional directions and/or map display to the driver, as expressly disclosed by *Jones*, because doing so would have achieved the predictable and desired result of assisting the driver in quickly and easily obtaining directions to the next stop location.

118. Moreover, one skilled in the art would have considered it obvious to provide the ability for the operator to retrieve the textual or map data upon selecting the stop because doing so would provide the operator more details on demand. Doing so would have been possible using same VCU features (the ability

to scroll through the list and select an entry and the ability to display detailed directions and/or map displays) as already disclosed by *Jones*.

9. "(G) displaying the detailed assignment data to the field crew, and"

119. In my opinion, *Jones* discloses this feature for the reasons discussed above in Section IX.D.8. As addressed above, *Jones* discloses providing and displaying stop information in textual and map format to the operator via the VCU. *See* Section IX.D.8. One skilled in the art would have considered this detailed assignment data. *See* Section IX.D.8.

10. "(H) in response to field crew input identifying an action was taken with regard to the assignment, updating the detailed assignment data"

120. In my opinion, *Jones* discloses this feature. *Jones* discloses drivers inputting information into the system via the VCU, as discussed above and shown in Figs. 11, 40-43. *See* Section IX.D.8. These interactions allow the driver to notify the BSCU that an attempt to deliver a package was made, or that a stop should be rescheduled. (Ex. 1102 at 9:52-65, 11:48-12:5.)

121. *Jones* states that "[t]he attempt to deliver switch 22 can be actuated by the driver of vehicle 12 upon reaching a user stop and finding no one available to sign for and/or receive a package." (*Id.* at 11:48-12:5.) In addition, *Jones* states "[t]he driver at a stop can actuate the reschedule stop switch 23 if the driver is

planning to revisit the stop in the same day." (*Id.*) For either of these inputs, "[t]he stored driver choices in the VCU 12 from the attempt to deliver and/or the reschedule stop switch/s, are sent to the BSCU 14." (*Id.* at 11:66-12:3.) The route stop list is updated according to the inputs by the driver. (*Id.* at 11:48-65.)

122. Moreover, the attempt to deliver switch "inform[s] the BSCU 14 to cancel this user stop from a list, and send a second message of the time of attempted delivery and package information to the user computer." (*Id.* at 35:19-27.) For example, Figure 43, reproduced below, shows the result of updating the detailed assignment data based on a driver's input identifying that the driver attempted delivery and the package was rescheduled, as denoted with "(AR)" next to the rescheduled stop. (Ex. 1102 at 9:59-65.)

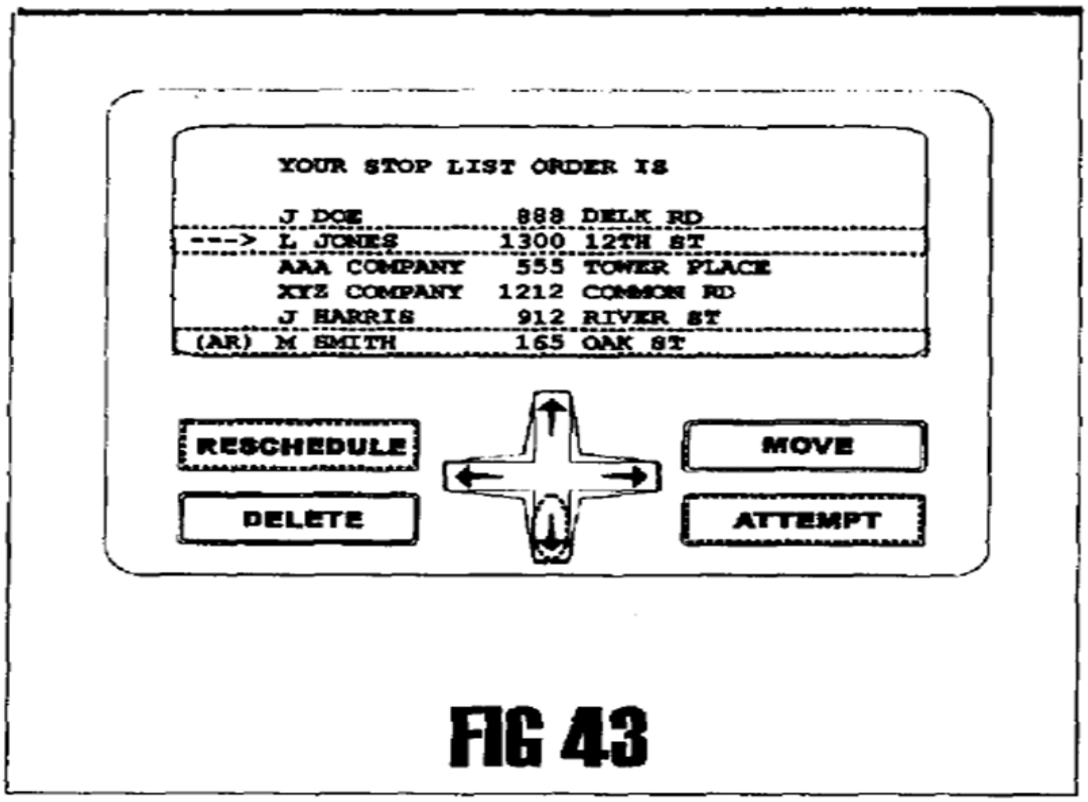


FIG 43

123. One skilled in the art would consider removing or rescheduling a stop from a route stop list and flagging the stop as attempted as teaching "updating the detailed assignment data." Each stop is an "assignment," in a route stop list (e.g. a list of assignments). Therefore, *Jones* discloses identifying an action (i.e. an attempt or rescheduling of delivery) was taken with regard to an assignment (i.e. a route stop), and updating the detailed assignment data (i.e. the detailed stop information) based on input from the field crew (i.e. the driver).

124. Moreover, I understand that the Patent Owner alleged that "FedEx updates the detailed assignment data (e.g., to reflect the current location and/or status of the package in its . . . database(s))." (Ex. 1106 at 18.) *Jones*'s updating

package status (e.g., rescheduled, attempted delivery) discloses "updating the detailed assignment data" as the Patent Owner appears to be interpreting it.

E. Summary: Claim 1 Is Obvious in View of *Jones* and *Kaman*

125. The combination of *Jones* and *Kaman* teaches each and every element of claim 1. *Jones* discloses a system and method for notifying users in advance of an impending vehicle arrival using a VCU and a BSCU. (*E.g.*, Ex. 1102 at 1:43-49, 10:52-59.). The VCU and BSCU of *Jones* coordinate a route stop list for a vehicle driver, which is displayed to the driver on the VCU. The BSCU of *Jones* optimizes the route stop list and sends updates to the VCU when new stops are added or stops are rescheduled. (*Id.* at 9:41-64, Figs. 40-43, 18:5-22, 21:66-22:9.) *Kaman* discloses a vehicle access controller for verifying operators of a vehicle before granting entry or use. (Ex. 1103 at 1:7-10, 6:66-7:10.) The system of *Kaman* verifies an indicia of identity, and is disclosed as useful in securing vehicles in both small and large organizations. (*Id.* at 1:37-45, 6:66-7:10.)

126. As detailed above, one skilled in the art would have found the combination of the *Jones* and *Kaman* to be obvious and would have been motivated to combine their teachings for the purposes of securing the vehicles and systems used in *Jones*. Both systems are disclosed in the context of commercial vehicles used in an organization, and both disclose a vehicle system (e.g., *Jones*'s VCU and *Kaman*'s vehicle access controller) and a backend system (e.g., *Jones*'s

BSCU and *Kaman*'s central computer). As I have explained in detail above in Sections IX.C, IX.D.5, and IX.D.6, doing so would require nothing more than applying known techniques to known systems in order to achieve the predictable and desired results of increased security and control for *Jones*'s vehicles and system. For these reasons, it is my opinion that claim 1 of the '900 patent is unpatentable.

X. CONCLUSION

127. 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 this 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.

128. I declare that all statements made herein of my knowledge are true, that all statements made on information and belief are believed to be true, and 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 Section 1001 of Title 18 of the United States Code.

Dated: January 23, 2017 By: Tal Lavian Jan 23, 2017

Tal Lavian, Ph.D.