

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NETFLIX, INC.,
Petitioner,

v.

VIDEOLABS, INC.,
Patent Owner.

Case No. IPR2023-00628

U.S. Patent No. 7,233,790

**DECLARATION OF ANTHONY WECHSELBERGER
IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 7,233,790**

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PETITIONER’S EXHIBIT LIST

Exhibit Number	Description
1001	Patent-at-Issue: U.S. Patent No. 7,233,790 to Kjellberg, “Device Capability Based Discovery, Packaging and Provisioning of Content for Wireless Mobile Devices,” filed June 19, 2003 (“the ’790 patent”).
1002	Declaration of Anthony Wechselberger.
1003	U.S. Patent Application Publication No. 2002/0131404 to Mehta, “Method and System for Maintaining and Distributing Wireless Applications,” filed November 28, 2001 (“Mehta”).
1004	File History of the ’790 patent (Application No. 10/600,746 (’790 patent FH)).
1005	U.S. Provisional Application No. 60/393,024.
1006	U.S. Provisional Application No. 60/392,383.
1007	U.S. Provisional Application No. 60/393,041.
1008	U.S. Provisional Application No. 60/392,999.
1009	C. Schläpfer, M. Kubik, and G. Zavagli, “Mobile Applications with J2ME,” A White Paper, Ericsson Radio Systems AB, July 7, 2001 (“Schlapfer”).
1010	U.S. Patent No. 7,283,811 to Gidron, “System and Method for Aggregation of User Applications for Limited-Resource Devices,” filed on November 15, 2001 (“Gidron”).
1011	U.S. Patent No. 7,266,369 to Moles, “System and Method for Provisioning or Updating a Mobile Station Using Over-The-Air Transfer of Interpreted Byte-Code Program,” filed on April 4, 2000 (“Moles”).
1012	U.S. Patent No. 8,107,937 to Jokinen, “System and Method for Automatic Provisioning Detection and Notification,” filed on July 31, 2001 (“Jokinen”).

1013	U.S. Patent No. 7,093,198 to Paatero, “Skins for Mobile Communication Devices,” filed on August 16, 2001 (“Paatero”).
1014	U.S. Patent Application Publication No. 2002/0069263 to Sears, “Wireless Java Technology,” filed on September 28, 2001 (“Sears”).
1015	U.S. Patent Application Publication No. 2002/0124065 to Barritt, “Mobile Computing System Architecture,” filed on August 6, 2001 (“Barritt”).
1016	U.S. Patent Application Publication No. 2003/0101246 to Lahti, “System and Method for Identifying and Accessing Network Services,” filed on November 29, 2001 (“Lahti”).
1017	EP 1303153B1 to Chanrasiri, “Apparatus and method for selecting software modules in a mobile terminal,” filed on October 8, 2002 (“Chanrasiri”).
1018	<i>Starz Entm’t, LLC v. VL Collective IP, LLC</i> , Joint Claim Construction Statement, pages 1-16 (Dkt. 64).
1019	<i>Unwired Planet, LLC v. Apple, Inc.</i> , Joint Claim Construction Statement, pages 1-7 (Dkt. 199).
1020	<i>VideoLabs, Inc. v. Netflix Inc.</i> , Motion to Dismiss for Failure to State a Claim filed by Petitioner, pages 1-5 (Dkt. 15).
1021	<i>VideoLabs, Inc. v. Netflix Inc.</i> , Opening Brief in Support re Motion to Dismiss for Failure to State a Claim filed by Petitioner, pages 1-31 (Dkt. 16).
1022	<i>VideoLabs, Inc. v. Netflix Inc.</i> , Answering Brief in Opposition re Motion to Dismiss for Failure to State a Claim filed by Patent Owner, pages 1-32 (Dkt. 18).
1023	<i>VideoLabs, Inc. v. Netflix Inc.</i> , Reply Brief re Motion to Dismiss for Failure to State a Claim filed by Petitioner, pages 1-18 (Dkt. 19).

1024	M. Eyer, “The Challenge of a Standard Software API,” 2000 NCTA Tech. Papers, pp. 242-253, May 7-10, 2000.
1025	<i>Starz Entm’t, LLC v. VL Collective IP, LLC</i> , Claim Construction Order, pages 1-4 (Dkt. 88).

I. INTRODUCTION

1. My name is Anthony Wechselberger, and I have been retained by counsel for Netflix, Inc. (“Netflix” or “Petitioner”) to submit this Declaration in support of Netflix’s petition for *Inter Partes* Review (“IPR”) and cancellation of claims 1–14 (the “Challenged Claims”) of U.S. Patent No. 7,233,790 (“the ’790 patent”) (Ex. 1001), which I understand has been assigned to VideoLabs, Inc. (“VideoLabs” or “Patent Owner”).

2. I have been asked to opine on whether the ’790 patent is anticipated and/or rendered obvious by the prior art. My opinions are based on my years of education, research and experience, as well as my investigation and study of relevant materials. The materials that I considered for this Declaration include all exhibits cited in this Declaration.

3. I may rely upon these materials, my knowledge and experience, and/or additional materials to rebut arguments raised by Patent Owner. Further, I may also consider additional documents and information in forming any necessary opinions, including documents that may not yet have been provided to me.

4. My analysis of the materials produced in this investigation is ongoing, and I will continue to review any new material as it is provided. This Declaration represents only those opinions I have formed to date. I reserve the right to revise,

supplement, and/or amend my opinions stated herein based on new information and on my continuing analysis of the materials already provided.

5. I am being compensated at my standard consulting rate for my time spent working on issues in this matter. I am also being reimbursed for any reasonable and customary expenses associated with my work and testimony. I have no financial interest in, or affiliation with, Petitioner or Patent Owner. My compensation is not dependent upon the outcome of, or my testimony in, the present IPR or any litigation proceedings.

II. QUALIFICATIONS

6. I am qualified by education and experience to testify as an expert in the field of digital content management systems for wireless devices. My academic and professional background is in electrical engineering and communication sciences, and I have been working in those fields since the completion of my M.S. in electrical engineering approximately 43 years ago. My background and qualifications are supplemented in my curriculum vitae, attached as Appendix A hereto. Here, I provide a summary of my qualifications and professional experience.

7. I received a Bachelor of Science degree in electrical engineering from the University of Arizona in 1974 and a Master of Science degree in electrical engineering from San Diego State University in 1979. In addition, in 1984, I

completed the Executive Program for Scientists and Engineers at the University of California at San Diego.

8. I am currently the President of Entropy Management Solutions (“EMS”), a position I have held since I founded the company in 1999. In this capacity, I perform consulting services related to technology and business development, content management, distribution and merchandising, systems engineering, and product design in the areas of industrial and consumer broadband and multimedia technologies and associated commercial systems. As a result of my twenty-five years of extensive technology experience in corporate life, and continuing as President of EMS, I have worked with various aspects of Internet, cable, broadcast and satellite television programming distribution, including systems and equipment used at satellite uplinks and cable head-ends, such as real-time computer control systems and associated databases used in conjunction with consumer appliances, such as set-top boxes.

9. I have over four decades of experience working with high technology systems related to military, commercial, and consumer communication systems, networks, and appliances. I have held various design, leadership, and executive positions in, for example, engineering, operations, sales and marketing, and product management at leading companies, such as TV/COM International, Inc. (TV/COM) and Oak Communications, Inc. (Oak), in those fields. As Vice President at Oak

Communications (in the 1980s), Chief Technology Officer at TV/COM (in the 1990s), and a consulting systems engineer (1999 to present), I have specialized in the areas of digital communications technologies, systems and networks, including infrastructures, communications equipment and associated signal processing, network management and command-and-control, and information security as used for content management, merchandising, and delivery to the receivers/consumers of information/content.

10. Consumer appliances are often the receivers/consumers of the communications systems I've worked with, and I've been involved, for example, in the design, manufacturing, sales, and servicing of consumer appliances, such as set-top boxes (STBs), since the early 1980s. My experience includes the development of terrestrial broadcast, satellite uplink, and cable head-end commercial equipment for television transmissions, as well as consumer appliance equipment, such as STBs and other home-based or home-networked devices. These architectures included computer control systems for networks and associated network device command and control, and for management of content distribution and consumer appliance functions. For example, these systems are addressable. "Addressability" enables the system operator to control the delivery of content and network services, network sourcing and receiving devices (*e.g.*, servers and transmission equipment and PC or STB receivers), and the consumer experience. Examples are delivery of software or

data files, for which purchased or subscription services or content is available, electronic program guides, and à la carte functions such as pay-per-view (PPV) and video-on-demand (VOD).

11. Of particular relevance to this matter, I have direct experience in the design and operation of centralized computer control systems used to support two-way addressable wired and wireless digital broadband content delivery systems. These computer control systems maintained a database of authorized users including their appliance types and subscription choices as well as supported real-time interaction with the appliance with respect to the types of information being received (*e.g.*, EPG data and updates, requests for on-demand content, change in subscription choices, parental control functions, and home shopping and polling).

12. Moreover, I can attest to the fact that the broadband industry began to address the issue of downloading files (*e.g.*, applications or video on demand (VOD) content) to set top boxes (STB) in the late 1990s, giving rise to the same kinds of challenges and needs allegedly addressed by the challenged '790 patent: accessing content by a population of receivers having diverse capabilities and/or access privileges. This was a period when manufacturers and system operators were planning for retail sales of STBs which would have distinguishing characteristics such as more or less processing power, varying degrees of on screen display (OSD) and electronic program guide (EPG) sophistication, and different kinds of

supplementary information access and/or Internet access capability. Just like the teachings of the '790 specification, the programming and information database servers used in the broadband industry needed to be able to provision content for distribution to accommodate this diversity. Thus, the '790 patent discloses features that were already known in the art at the time of the alleged invention.

13. I have been a participant in the development and evolution of modern consumer digital audio and digital video communications systems and technologies. In 1991, my employer, TV/COM, and I began to participate in the newly formed International Organization for Standardization (ISO) MPEG-2 digital television standards initiatives, and in the following year, we participated in both the European Digital Video Broadcast (DVB) and U.S. Advanced Television Systems Committee (ATSC) forums (which were based upon MPEG-2). By the mid-1990s, as the technologies and standards in support of digital television (DTV) moved towards implementation, the dawn of the Internet age also arrived. This had a dramatic impact on the way broadband systems engineers like myself began to plan for the future. This is because the concept of convergence—the melding of traditional broadband communications systems and equipment, computers, and computer networks, with that of the telecommunications world—was changing the communications infrastructure and technology landscape. When television distribution went all-digital, the information of television became simply “data” and

it became possible for the technologies of digital television, computers and computer networks, and the telephony industry (which was in the midst of its transition to digital infrastructure that began in the 1970s) to coalesce. Support for on-line and real-time Internet services demanded a high-performance two-way data transmission capability, and so broadband network providers began to upgrade their distribution infrastructures accordingly.

14. In conjunction with this convergence, as TV/COM's Chief Technology Officer, I directed the expansion of our network products into broadband data communications generally, from its initial focus on digital television. Networks became more advanced in order to support real-time interaction between consumers and various information sources, and interactive and on-line applications led to rapid adoption of client-server information access architectures. The ubiquitous set-top box began to evolve from a minimalist appliance towards its current status as a communications hub of the consumer's media room. This was supported by the exponential increase in the capabilities of powerful yet inexpensive integrated circuits, such as microprocessors and memory that allowed STBs to become more software driven and support advanced digital signal processing (DSP) needs.

15. In my consulting work, I have continued to work with technologies, equipment and network infrastructures for content generation, distribution, and consumption. My current work involves both traditional and newly developing

architectures and distribution channels. As an example of the latter, I am the chief security systems architect on behalf of the five major Hollywood studios for their “Digital Cinema Initiatives” (DCI) consortium. DCI has developed and evolved the requirements and specifications for transitioning first-run theatrical movie releases from film to digital files for distribution and exhibition display. I am responsible for all elements of command and control and digital rights management (DRM) for the digital cinema system design and implementation.

16. I also represent DCI at the Society of Motion Picture and Television Engineers (SMPTE), which has developed and is continuing to develop a set of internationally recognized standards for global adoption of digital cinema. The migration to all-digital distribution impacts other content distribution channels, such as early window release for hospitality, airplane, and cable/satellite video-on-demand (VOD), as well as newer so called “over-the-top” (OTT) distribution channels based on Internet distribution. I have also been a strategy and technology consultant to content management and distribution entities in these areas.

17. I am currently a member of the Society of Cable & Telecommunications Engineers (SCTE), the Society of Motion Picture and Television Engineers (SMPTE) and the Institute of Electrical and Electronic Engineers (IEEE). I have previously been a member of the International Organization for Standardization (ISO), Motion Picture Experts Group (MPEG), the

Digital Video Broadcast (DVB) group, and as Chief Technology Officer of TV/Com International I was a voting member of the Advanced Television Systems Committee (ATSC).

18. I am an inventor on U.S. Patent No. 4,531,020, issued July 23, 1985, and entitled “Multi-layer Encryption System for the Broadcast of Encrypted Information” and U.S. Patent No. 5,113,440, issued May 12, 1992, and entitled “Universal Decoder.” I am an inventor on two patent applications: Application No. 10/028,113, filed December 21, 2001 and entitled “Storage and Delivery of Electronic Media Content with Advertising” (abandoned); and Application No. 63/091,518, filed October 14, 2020 and entitled “Remote Audience Participation at Live Events.” I have participated in U.S. patent prosecution, and have a general understanding of the process, and of the novelty and non-obviousness requirements for patentability.

19. As a result of the qualifications set forth *supra*, I consider myself to be knowledgeable about and an expert in the field of digital content staging, management and delivery in wired and wireless systems. While all the independent claims of the ’790 patent are directed to wireless communications devices, the claimed aspects (such as knowing/obtaining device capabilities, applications/content packaging and provisioning, applications/content catalogs and descriptions, etc.) appear to be common to both wired and wireless systems.

III. SCOPE OF OPINIONS

20. I have been asked to provide my opinions regarding whether:

- Claims 1-4 and 8-11 of the '790 patent are anticipated by Mehta (Ex. 1003) (Ground I); and
- Claims 1-14 of the '790 patent would have been obvious to a person of ordinary skill in the art ("POSITA") at the time of the alleged invention in view of Mehta (Ex. 1003) and Schlapfer (Ex. 1009) (Ground II).

21. This Declaration, including the exhibits cited herein, sets forth my opinions on these topics. In short, it is my opinion that Mehta anticipates claims 1-4 and 8-11 of the '790 patent; and Mehta and Schlapfer render obvious claims 1-14 of the '790 patent.

IV. MATERIALS REVIEWED AND CONSIDERED

22. The materials I considered and relied upon in preparing my Declaration and forming my opinions include all exhibits cited to in this Declaration, including the '790 patent, the '790 file history, and the relevant prior art, as I discuss below.

23. I also have relied on my academic and professional experience in reaching the opinions expressed in this Declaration.

V. LEVEL OF ORDINARY SKILL IN THE ART

24. In rendering the opinions set forth in this Declaration, I was asked to consider the patent claims and the prior art through the eyes of a POSITA. The "art"

is the field of technology to which a patent is related. I understand that the purpose of using the viewpoint of a POSITA is for objectivity.

25. I considered factors such as the educational level and years of experience of those working in the pertinent art; the types of problems encountered in the art; the teachings of the prior art; patents and publications of other persons or companies; and the sophistication of the technology. I understand that a POSITA is not a specific real individual, but rather a hypothetical individual having the qualities reflected by the factors discussed above.

26. Taking these factors into consideration, it is my opinion that a POSITA as of the time of the alleged invention of the '790 patent would have had a bachelor's degree in electrical or computer engineering, or a closely related scientific field such as computer science, and two years of work experience with digital multi-media content distribution and management, and associated system infrastructures. Alternatively, any lack of experience could be remedied with additional education (*e.g.*, a master's degree), and likewise, a lack of education can be remedied with additional work experience (*e.g.*, 4-5 years).

VI. STATEMENT OF LEGAL PRINCIPLES

A. Claim Construction

27. I understand that terms appearing in the patent claims are to be interpreted according to their "ordinary and customary meaning" in an IPR

proceeding. In determining the ordinary and customary meaning, the words of a claim are first given their plain meaning as they would have been understood by a POSITA at the time of the alleged invention, in light of the specification and file history. I understand that treatises and dictionaries may be consulted, albeit under limited circumstances, to determine the meaning attributed by a POSITA at the time of the alleged invention. I have followed this approach in my analysis and have applied the ordinary and customary meaning of those terms throughout my analysis in this Declaration.

28. I understand that the words of the claims should be interpreted as they would have been understood by a person of ordinary skill in the art at the time the alleged invention was made (not today).

B. Anticipation

29. I understand that if each and every element of a claim is disclosed in a single prior art reference, then the claimed invention is anticipated and not patentable under pre-AIA 35 U.S.C. § 102. In order for the invention to be anticipated, each element of the claimed invention must be described or embodied, either expressly or inherently, in a single prior art reference. I also understand that a reference inherently discloses a claim limitation when that claim limitation is necessarily present in the reference.

C. Obviousness

30. I have been informed that a patent claim is invalid as “obvious” under pre-AIA 35 U.S.C. § 103 in light of one or more prior art references if it would have been obvious to one of ordinary skill in the art, taking into account (1) the scope and content of the prior art, (2) the differences between the prior art and the claims, (3) the level of ordinary skill in the art, and (4) any so-called “secondary considerations” of non-obviousness, which include: (i) “long felt need” for the claimed invention, (ii) commercial success attributable to the claimed invention, (iii) unexpected results of the claimed invention, and (iv) “copying” of the claimed invention by others.

31. I have been informed that a claim can be obvious in light of a single prior art reference or multiple prior art references. To be obvious in light of a single prior art reference or multiple prior art references, there must be a reason to modify the single prior art reference, or combine two or more references, in order to achieve the claimed invention. This reason may come from a teaching, suggestion, or motivation to combine, or may come from the reference or references themselves, the knowledge of one skilled in the art, or from the nature of the problem to be solved, and may be explicit or implicit from the prior art as a whole. I have been informed that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. I also

understand it is improper to rely on hindsight in making the obviousness determination.

VII. TECHNOLOGY BACKGROUND AND DISCUSSION OF THE PRIOR ART

32. It is my opinion that all of the elements of claims 1-14 were already known in the prior art before the priority date of the '790 patent. Accordingly, I conclude that there is nothing novel or non-obvious about the alleged invention disclosed in the '790 patent.

A. Digital Content Provisioning Systems for Wireless Communication Devices

33. Content provisioning systems for wireless and wired communication devices have long been known. By 2000, the popularity of digital wireless communication devices (*e.g.*, cellular phones) was rapidly increasing, and software-driven applications (*e.g.*, audio and/or video applications) for so-called “smart” wireless communication devices became much more common. Ex. 1011 at 1:44-46, 1:66-2:3; Ex. 1001 at 1:32-45. Various techniques for setting the initial configuration parameters of a wireless device, referred to as “provisioning,” over a wireless network were developed prior to 2002. Ex. 1016 at [0008]. For example, a technique for automatically detecting unprovisioned devices in a wireless network and subsequently initiating provisioning procedures was developed. Ex. 1012 at 2:7-8, 2:47-51. A technique for provisioning of downloadable user applications to a wireless device through an integrated platform which handles all aspects of

aggregation and management of such applications was also developed. Ex. 1010 at 2:64-3:8. Thus, the prior art demonstrates that support for wireless device provisioning and downloadable applications via a wireless network was known prior to 2002.

34. But such provisioning for downloadable applications was not limited to the wireless industry, as it was also well known to the broadband industry by the late 1990s. For example, the abstract of an article from the National Cable Television Association (NCTA) Technical Papers states:

Cable Multiple-System Operators (MSOs) would like to supply not only digital audio, video, and data services, but also software applications that can run on customer-owned equipment. With this goal in mind, CableLabs® issued a Request for Proposal in 1999 to help identify and standardize a software Application Program Interface (API) for OpenCable compliant retail boxes. This paper explores the challenges involved in this effort, and identifies some of the pitfalls and obstacles that must be overcome. These include issues of platform independence, the cost and complexity of the platform, the challenge to support an evolving digital world, and the need on the part of consumer electronics manufacturers to differentiate their products in the marketplace. Ex. 1024 at Abstract.

The article explains that consumer electronics manufacturers typically offer low-end, middle and high-end products, and that code download scenarios that don't take this into consideration, and assume all devices will behave the same, will be troubling for the industry. Ex. 1024 at p. 243. It is further explained that the concept of "one application for all retail devices" is impractical, for example, because it may not enable provisioning for or acknowledgment of product differentiation. *Id.* at p. 247. Examples of distinguishing device hardware and interface features are given as 3D graphics acceleration, special content decoding formats, support for peripheral devices, camera and video input ports, and wireless communication ports and protocols. *Id.* at p. 248. The article provides an exemplary progression of device differentiation as levels 0-3, with level 0 being a low-end (Watch TV) STB, with increasing device capability and features for level 1 (Web browser box), level 2 (Web browser plus Java), and level 3 (Cooperative downloaded applications). *Id.* at pp. 250-252. While the article does not directly address cable head end infrastructure content/information databases, it would have been understood by a POSITA that these would be present to support content downloads. Importantly, the article teaches that a one-size-fits-all approach as a solution for downloadable services would not enable provisioning for different device capabilities and advanced services that system operators expected to provide. *Id.* at p. 252. Thus, content

provisioning based on device capability was well known in the broadband/cable industry.

35. It was also known to include browser support in wireless (and wired) devices, enabling consumer-friendly user interfaces for searching or surfing for information/content, and implementing two-way data exchanges between servers on the Internet and user devices. Ex. 1003 at [0063], [0120], Ex. 1010 at 1:42-44, 10:40-51; Ex. 1011 at 1:66-2:6; Ex. 1013 at 2:20-25, 6:23-57; Ex. 1014 at [0003], [0005], [0009], [0042]; Ex. 1016 at [0003]; Ex. 1024 at pp. 251-252. Related to this were developments that supported the need to enable product and applications differentiation and customization. Ex. 1003 at [0059], [0064]; Ex. 1013 at 6:58-7:13; Ex. 1014 at [0012], [0032]; Ex. 1015 at Abstract; Ex. 1024 at pp. 251-252.

36. Those having skill in the art recognized that users' wireless (and wired) devices had different sets of capabilities. Ex. 1003 at [0059], [0064], [0067], [0085]; Ex. 1010 at 1:58-67, 2:23-32, 9:1-11; Ex. 1012 at 12:4-12. Ex. 1014 at [0009], [0012], [0032], [0038], [0046]; Ex. 1015 at [0059], [0064]; Ex. 1024 at pp. 243, 248, 250-252. It was also known that content delivery infrastructures including storage and serving means could comprise different content provisioning capabilities corresponding to recipient device capabilities. Ex. 1001 at 1:60-2:7; Ex. 1003 at [0064]; Ex. 1014 at [0012], [0046]; Ex. 1015 at [0015], [0017], [0077], [0085], [0090]. Prior to the purported invention of the '790 patent, it was recognized that

an integrated content provisioning system was needed to provide appropriate digital content corresponding to the capabilities of the user's wireless device. Ex. 1003 at [0005], [0007], [0059], [0085] [0131]; Ex. 1010 at 2:23-32, 2:64-3:8, 8:13-19; Ex. 1014 at [0012]; Ex. 1015 at Abstract; Ex. 1024 at pp. 242-243.

B. U.S. Patent Application Publication No. 2002/0131404 to Mehta (Ex. 1003)

37. I understand that Mehta is prior art under pre-AIA § 102(a) and (e) because it was filed on November 28, 2001 and published on September 19, 2002. From my review of the '790 patent and file history, I note that Mehta was not disclosed to or considered by the Patent Office during prosecution.

38. Mehta is directed to computer and network-based methods and systems for maintaining and provisioning wireless applications to wireless devices. Ex. 1003 at [0005], [0059], Abstract. Mehta discloses a Mobile Application System ("MAS") that stores and distributes wireless applications and other types of content to end user devices over a wireless network connection. *Id.* at [0059-60]. Figure 1 of the '790 patent illustrates an architecture by which subscribers 101, 101b of wireless services can request and download software applications from the MAS 105.

39. A comparison of Mehta's architecture with the corresponding '790 architecture (*e.g.*, Fig. 2) demonstrates the similarities between the respective architectures of the '790 patent and that of Mehta.

40. According to the disclosure of Mehta, the MAS "determines the type and capabilities of the subscriber device from which the request was made and determines whether the device capabilities are sufficient to support a specific application." Ex. 1003 at [0085]. The MAS analyzes profiles such as "a subscriber profile, a device profile, and an application profile" stored in "a data repository" to determine that a specific application can execute properly on the subscriber device under examination. *Id.* at [0005], [0067], [0099]. When the MAS receives a request from the subscriber, it determines an initial list and "filters this initial list based upon subscriber and device capabilities" to select an appropriate version of the requested item from the initial list. *Id.* at [0067]. The MAS then "provisions and packages the requested application, and sends the packaged application to the requesting subscriber device." *Id.* at [0070].

C. A Paper entitled "Mobile Applications with J2ME" to Schlapfer (Ex. 1009)

41. I understand that Schlapfer is prior art under at least pre-AIA § 102(a) because it was published on July 7, 2001. From my review of the '790 patent and

file history, I note that Schlapfer was not disclosed to or considered by the Patent Office during prosecution.

42. Schlapfer is a technical paper directed to Java technology for mobile devices and applications as of July, 2001. Ex. 1009 at 3. Schlapfer references Java 2 Micro Edition (“J2ME”) as useful for “[s]ervice providers who wish to deliver content to their customers over resource-constrained devices.” *Id.* at 4. Schlapfer further notes that mobile devices “have a small display . . . and are capable of communicating via a mobile network with limited bandwidth.” *Id.* at 7.

43. Schlapfer also discusses provisioning of MIDlets. Provisioning is the process used to download and deploy applications to a mobile device. *Id.* at 7, 11, 12. MIDlets are applications written according to Mobile Information Device Profile for the J2ME Platform (“MIDP”). Several MIDlets can be contained in a single “jar file,” called a MIDlet suite,¹ which may be optionally accompanied by an application descriptor. *Id.* at 7. An application descriptor is a text file containing

¹ A JAR file is a file format based on the popular ZIP file format and is used for aggregating many files into one. A JAR file is essentially a zip file that contains an optional META-INF directory. They are used as building blocks for applications and extensions. See:

<https://docs.oracle.com/javase/8/docs/technotes/guides/jar/jar.html#Intro>.

selected information from the manifest file, together with the total size of the jar file.

Id. The file extension of this application descriptor is .jad, and includes mandatory attributes such as name, version, vendor, URL, and size. *Id.* at 7, 8.

D. Other Evidence Regarding the State of the Art

44. I have also reviewed other evidence regarding the state of the art. The prior art in Exs. 1010-1016 further reflects the state of the art, level of ordinary skill in the art, common knowledge in the art, and/or common sense in the art, and is therefore also relevant to the background of the invention and my invalidity analysis. For example, Sears (U.S. Patent Application Publication No. 2002/0069263 A1, Ex. 1014) teaches an “infrastructure that allows for seamless and optimized interactions to occur between users, devices, providers, and applications located in a network environment.” Ex. 1014 at [0002]. More particularly, the invention summary describes the system architecture:

“the present invention includes a server that may be used as a central point of focus for users of mobile devices, carriers, network operators, content providers, application developers, and device manufacturers.

... the present invention may provide a location for users to look for content and information; a service and content delivery platform for maintaining statistics and metrics for use by the users of mobile devices, carriers, network operators, content providers, application

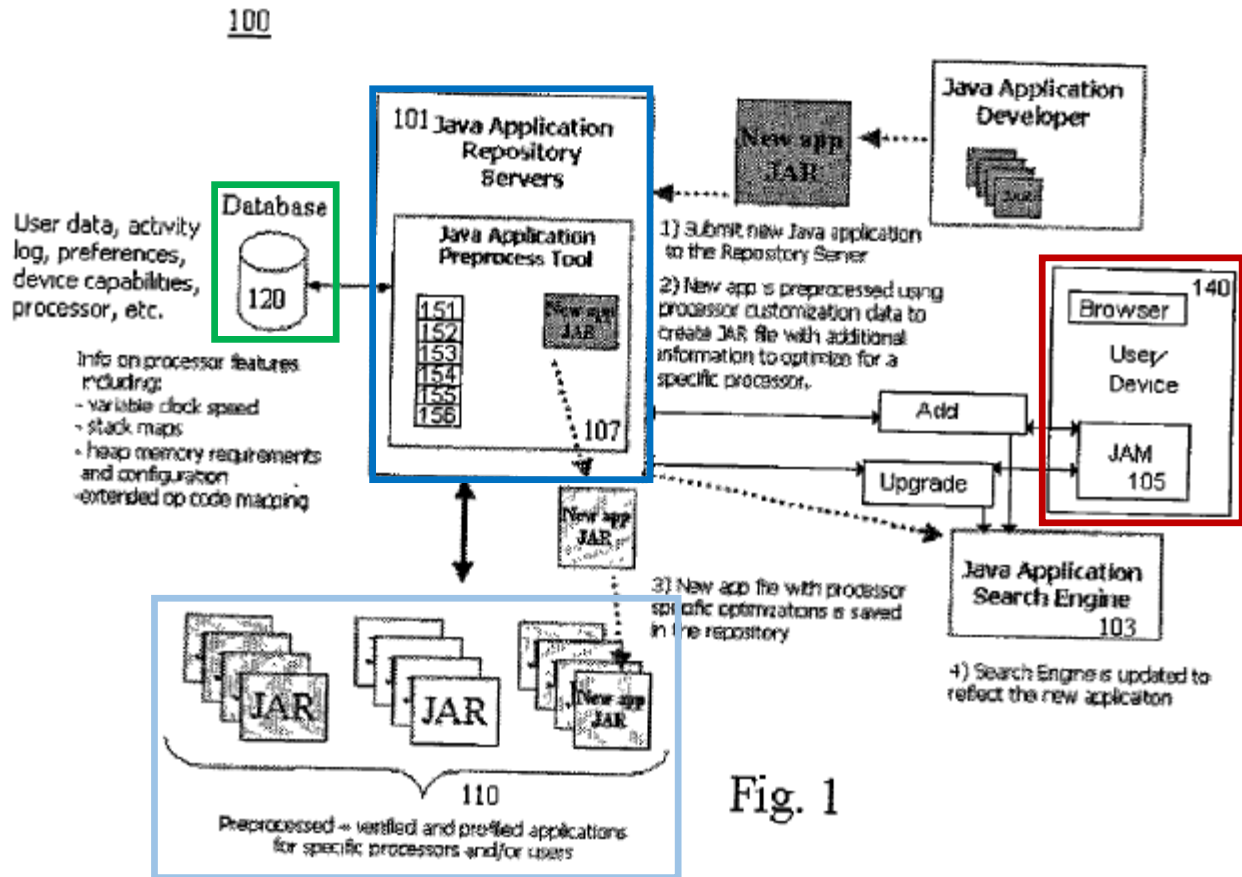
developers, and device manufacturers; and a location for manufacturers to upload information about their products for use by developers.” *Id.* at [0012].

45. Sears teaches provisioning, packaging and distribution of content, and the customizing of applications based on characteristics of users and/or their devices:

“applications may be altered or repackaged to include either a subset or superset of functionality required by users and devices in a network as determined by metrics and characteristics describing the applications, users, and devices. In one embodiment, user, device, and application metrics and characteristics may be stored on a network server. ... based on the metrics and characteristics, applications and content may be qualified, processed, optimized, and/or customized prior to dissemination of the applications to users and/or devices in the network. ... users may request applications and content and may be provided them based on the metrics and characteristics specific to the users and/or their devices.” *Id.*

46. Figure 1 of Sears, reproduced below, shows an integrated system infrastructure with a central server 101 supported by a database 120 that stores information about users and device capabilities, and applications 110 that “may be

pre-processed, verified, and/or profiled for use by devices 140 and/or users in the network 100.” *Id.* at [0034].



Ex. 1014 at Fig. 1 (annotated)

47. Similarly, *Gidron* (U.S. Patent No. 7,283,811, Ex. 1010)² teaches an integrated platform that handles aggregation and management of applications from

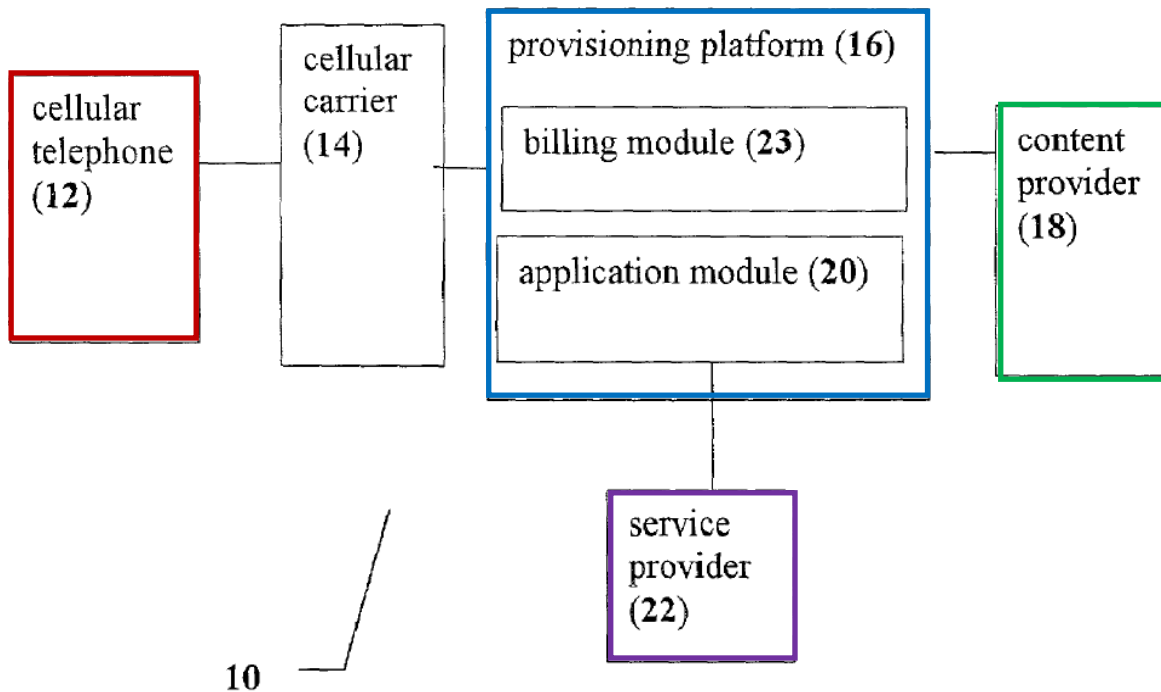
² The face of the '790 patent identifies U.S. Patent Publication No. 2003/0060188 to *Gidron* (filed on February 21, 2002) as a reference considered by the examiner; this Publication is a continuation-in-part of the *Gidron* patent (filed on November 15, 2001) cited herein.

content providers to be delivered to the users' wireless devices. Ex. 1010 at 1:12-22, 2:58-3:17, Abstract, cl. 2. Gidron explains that cellular telephones:

... are limited by at least one of available memory, storage space, size of the display screen, and/or computational power, as represented by the ability to perform various data processing tasks. These limitations are imposed by the requirements of portability, convenient and simple operation, battery lifetime, weight and size. In addition, the type of limitations and the hardware specifications of each cellular telephone, or other related handheld device, also differ between, cellular telephone service providers and even manufacturers. Thus, designing a single type of application which is suitable for all cellular telephones, for example, is clearly very difficult. *Id.* at 1:60-2:4.

Figure 2, as reproduced below, shows a block diagram that illustrates how content providers 18, service providers 22, and users 12 of wireless services interplay using a provisioning platform 16 in an integrated system 10.

Figure 2



Ex. 1010 at Fig. 2 (annotated), *see also id.* at 6:64-7:37.

48. Notably, Gidron discloses that the service provider 22 controls access to the content or user applications by the user according to capabilities of the user's device 12 (*id.* at Abstract); the content provider 18 optionally specifies different versions of the application to be automatically downloaded according to the location of the user's device 12 (*id.* at 8:13-19); the system 10 collects such information as the identity of the user's device 12 (*id.* at 10:28-39); the provisioning platform 16 includes an application repository 20 where the user applications are organized with information about the available applications (*id.* at 8:41-43); and each user only views application(s) that are suitable for the particular service package to which the user is subscribed (*id.* at 9:32-38) (emphasis added).

49. I understand that *Gidron* is prior art under pre-AIA §§ 102(a) and (e) because it was filed on November 15, 2001 and issued on October 16, 2007.

VIII. SUMMARY OF THE '790 PATENT

50. The '790 patent is titled “Device Capability Based Discovery, Packaging and Provisioning of Content for Wireless Mobile Devices.” Ex. 1001. I understand that the '790 patent was filed on June 19, 2003 as application number 10/600,746, and purports to claim priority to the June 28, 2002 filing of U.S. Provisional Application Nos. 60/393,024 (Ex. 0005; “the '024 provisional application”), 60/392,383 (Ex. 0006; “the '383 provisional application”), 60/393,041 (Ex. 0007; “the '041 provisional application”), and 60/392,999 (Ex. 0008; “the '999 provisional application”). *See* '790 patent (Ex. 1001), field (22, 60).

51. The '790 patent, filed June 19, 2003, summarizes the invention as “a method and apparatus for providing access to content for use on wireless communication devices.” Ex. 1001 at 2:50-52. According to the patent, multiple items of content are stored in a server system and made available for use in wireless communication devices used by wireless services subscribers. *Id.* at 2:52-55; *see also id.* at Abstract. Each independent claim of the '790 patent requires maintaining a product catalog that includes a description of multiple items of content and references to different versions of each item of content, where each version

corresponds to a different set of device capabilities. *Id.*; *see also id.* at Cls. 1, 2, 8, 9.

52. Figure 1 of the '790 patent is reproduced below:

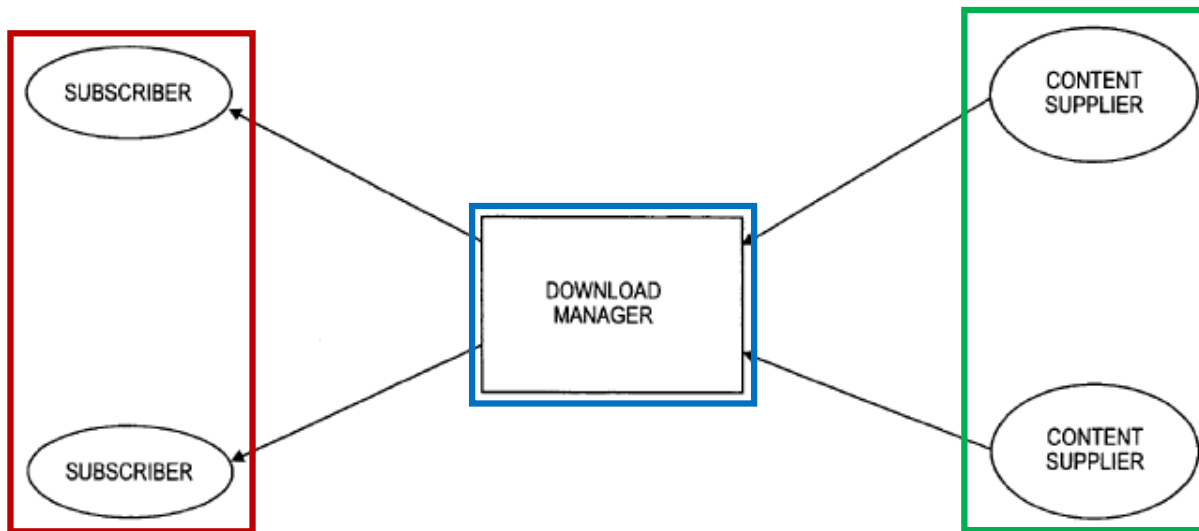


FIG. 1

Ex. 1001 at Fig. 1 (annotated).

In conjunction with Fig. 1, the '790 patent describes a download manager 1, which acts as an intermediary between multiple content suppliers 2 and multiple customers 3. *Id.* at 4:11-15, Fig. 2. The content suppliers 2 add digital products to the set of products managed by the download manager 1. *Id.* at 4:15-18. The content suppliers 2 associate various attributes with the products. *Id.* at 4:18-20. The download manager 1 includes a product manager 32 that interfaces with various content suppliers and provides centralized product cataloging. *Id.* at 6:46-52. The product manager 32 determines, from a product catalog 54, which products are supported by the client device based on the capabilities of the client device. *Id.* at 12:9-13. The

download manager 1 includes a device capability manager 37 that conducts device recognition, and device capability determination and management:

... recognition of devices and their capabilities is used for a variety of purposes. Such as to filter the set of available products that a subscriber can discover when connecting to the download manager 1, to select the appropriate implementations of products that are purchased, and to select the appropriate provisioning model for provisioning a purchased product in a client device. *Id.* at 7:39-45.

53. Figure 3 (reproduced below) from the patent illustrates these elements along with other elements such as a provisioning manager 28.

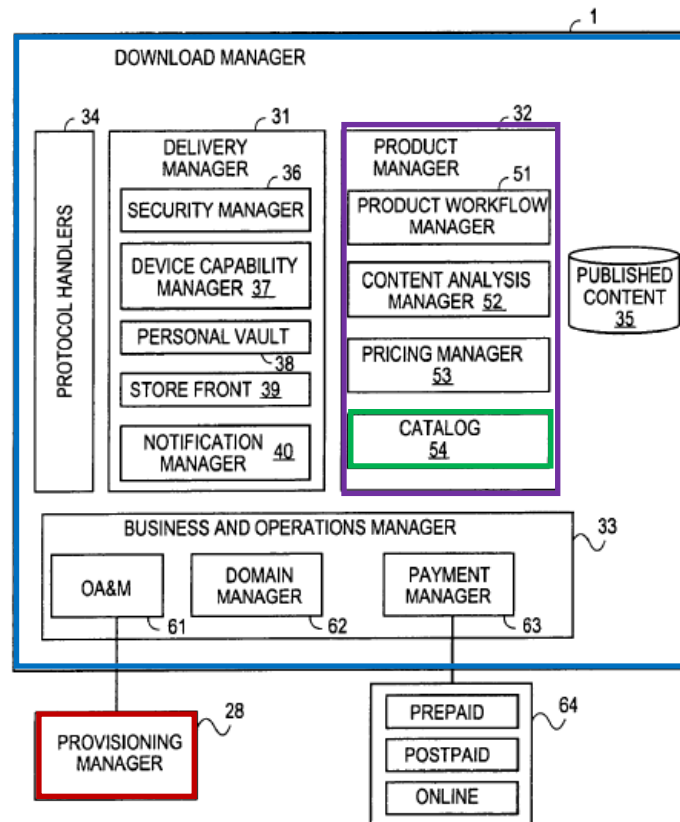


FIG. 3

Ex. 1001 at Fig. 3 (annotated).

54. The '790 patent explains that the provisioning model “used to provision a particular product in a particular client device is based on the device capabilities” and that “a provisioning ‘model’, in this context, includes a particular provisioning protocol and a content packaging format.” *Id.* at 12:65-13:3. Upon receiving a request for an item of content from a client device, the provisioning manager 28 downloads the content using a provisioning protocol of the selected provisioning model. *Id.* at 13:39-44.

B. Challenged Claims

55. The '790 patent has four independent claims, claims 1, 2, 8, and 9, and ten dependent claims, claims 3-7 and 10-14. I have been asked to opine on all of claims 1-14, which are listed below:

1[pre] A method of providing access to content for use on wireless communication devices, the method comprising:
1[a][1] receiving and storing a plurality of items of content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers,
1[a][2] including receiving a plurality of different implementations of at least one of the items of content, where each implementation of any given item of content corresponds to a different set of device capabilities; and,
1[b] maintaining a product catalog containing a description of the items of content, the product catalog including, in association with each item of content, a reference to each implementation of said item of content.
2[pre] A method of providing access to digital content for use on wireless communication devices, the method comprising:
2[a][1] receiving and storing in a server system a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers,
2[a][2] including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;
2[b] operating the server system to maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;
2[c] receiving a request from a wireless device used by one of the subscribers;
2[d] in response to the request, selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and
2[e] presenting the selected portion of the product catalog to the subscriber via a wireless network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content

in said portion, regardless of the number of implementations of each said item.
3[a] A method as recited in claim 2, wherein said selecting a portion of the product catalog comprises: in response to the request, determining the identity of the wireless device used by the subscriber, wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and
3[b] selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.
4[a] A method as recited in claim 2, further comprising: receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;
4[b] selecting an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and
4[c] downloading the selected implementation of the item of digital content to the wireless device used by the subscriber.
5[a] A method as recited in claim 4, further comprising associating each of the items of digital content in the server system with a plurality of different provisioning models, each of the provisioning models corresponding to a different set of device capabilities,
5[b] each provisioning model including a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.
6[a] A method as recited in claim 5, further comprising: receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;
6[b] identifying device capabilities of the wireless device used by the subscriber;
6[c] selecting one of a plurality of provisioning models associated with the requested item in the server system, based on the device capabilities of the wireless device used by the subscriber;
6[d] packaging the requested item according to the selected provisioning model; and
6[e] provisioning the requested item in the wireless device used by the subscriber according to the selected provisioning model.

7[a] A method as recited in claim 6, wherein: said packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item; and
7[b] said provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.
8[pre] A system comprising:
8[a] a network interface through which to communicate over a communication network; and
8[b][1] a download manager to receive and store a plurality of items of content to be made available for use in wireless communication devices used by a plurality of wireless telecommunications subscribers,
8[b][2] including receiving a plurality of different implementations of at least one of the items of content, where each implementation of any given item of content corresponds to a different set of device capabilities; and,
8[c] maintain a product catalog containing a description of the items of content, the product catalog including, in association with each item of content, a reference to each implementation of said item of content.
9[pre] A system comprising:
9[a] a processor; and
9[b][1] a storage facility accessible to the processor and containing code which, when executed by the processor, causes the processing system to receive and store a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless telecommunications subscribers,
9[b][2] including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;
9[c] maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;
9[d] receive a request from a wireless device used by one of the subscribers;
9[e] in response to the request, select a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and

9[f] cause the selected portion of the product catalog to be presented to the subscriber via a wireless telecommunications network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item.
10[a] A system as recited in claim 9, wherein selection of said portion of the product catalog comprises: in response to the request, determining the identity of the wireless device used by the subscriber, wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and
10[b] selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.
11[a] A system as recited in claim 10, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to: receive from the subscriber a request for one of the items of digital content in said portion of the product catalog;
11[b] select an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and
11[c] download the selected implementation of the item of digital content to the wireless device used by the subscriber.
12[a] A system as recited in claim 11, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to: associate each of the items of digital content in the server system with a plurality of different provisioning models, each of the provisioning models corresponding to a different set of device capabilities,
12[b] each of the provisioning models including a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.
13[a] A system as recited in claim 12, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to: receive from the subscriber a request for one of the items of digital content in said portion of the product catalog;
13[b] identify device capabilities of the wireless device used by the subscriber;

13[c] select one of a plurality of provisioning models associated with the requested item in the server system, based on the device capabilities of the wireless device used by the subscriber;
13[d] package the requested item according to the selected provisioning model; and
13[e] provision the requested item in the wireless device used by the subscriber according to the selected provisioning model.
14[a] A system as recited in claim 13, wherein packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item; and
14[b] wherein provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.

C. The '790 Patent File History (Ex. 1004)

56. The '790 patent issued from U.S. Patent Application No. 10/600,746 ("746 Application"), filed June 19, 2003, which claimed priority to the June 28, 2002 filing of U.S. Provisional Application Nos. 60/393,024 (Ex. 0005; "the '024 provisional application"), 60/392,383 (Ex. 0006; "the '383 provisional application"), 60/393,041 (Ex. 0007; "the '041 provisional application"), and 60/392,999 (Ex. 0008; "the '999 provisional application"). *See* '790 patent (Ex. 1001), field (22, 60).

57. The '790 patent was allowed based on the Examiner's determination that method claims 5-8 and 10-11 were allowable in the first office action. Ex. 1004 at 65. In response, Patent Owner amended the remaining claims in view of the allowable claims. Specifically, Patent Owner cancelled claims 1-4, changed

dependency of claim 9, and added new claims 12-18 that recite limitations substantially similar to the allowable method claims in apparatus format. *Id.* at 52-57.

58. As the reasons for allowance, the Examiner relied on the prior art failing to disclose “receiving and storing a plurality of different implementations of the items of content” and the art’s failure to “teach maintaining a catalog describing the items of content.” *Id.* at 43.

D. Claim Construction (37 C.F.R. § 42.104(b)(3))

59. I understand that in the litigation, *VideoLabs, Inc. v. Netflix Inc.*, Case 1:22-cv-00229 (D. Del.), neither Petitioner nor Patent Owner have yet had the opportunity to propose any constructions for any terms in the claims of the ’790 patent. For the purposes of my analysis, I have been asked to assume that no constructions are necessary, and that the ordinary and customary meanings of the claim terms to a POSITA at the time of the alleged invention of the ’790 patent apply.

IX. PRIORITY DATE OF THE ’790 PATENT

60. I have been informed that a patent is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the latter application as required by the “written description” requirement of 35 U.S.C. §112. I have been informed that for an earlier

patent application to have an adequate written description of the invention it must show, within the four corners of the earlier application, that the inventors were in possession of the invention at the time the earlier application was filed. I have also been informed that in order to satisfy the written description requirement, a POSITA, reading the original disclosure, must immediately discern the limitation at issue in the claims. I have been further informed that it is insufficient if the limitations are obvious variants of the disclosure in the specification.

61. I understand that Petitioner asserts that Patent Owner is not entitled to priority to an application before the June 19, 2003, filing date of the '790 patent because (i) although the applicant, during prosecution, claimed priority to the June 28, 2002 filing date of the '024, '383, '041, and '999 provisional applications, it never demonstrated that the provisional applications actually support the issued claims of the patent; and (ii) nor do the provisional applications actually support such a claim. However, because the references I have used in Grounds 1 and 2 are prior art to both the alleged June 28, 2002 and as filed June 19, 2003 priority dates, this debate is irrelevant to my testimony and opinions.

X. APPLICATION OF THE PRIOR ART TO CLAIMS 1–14

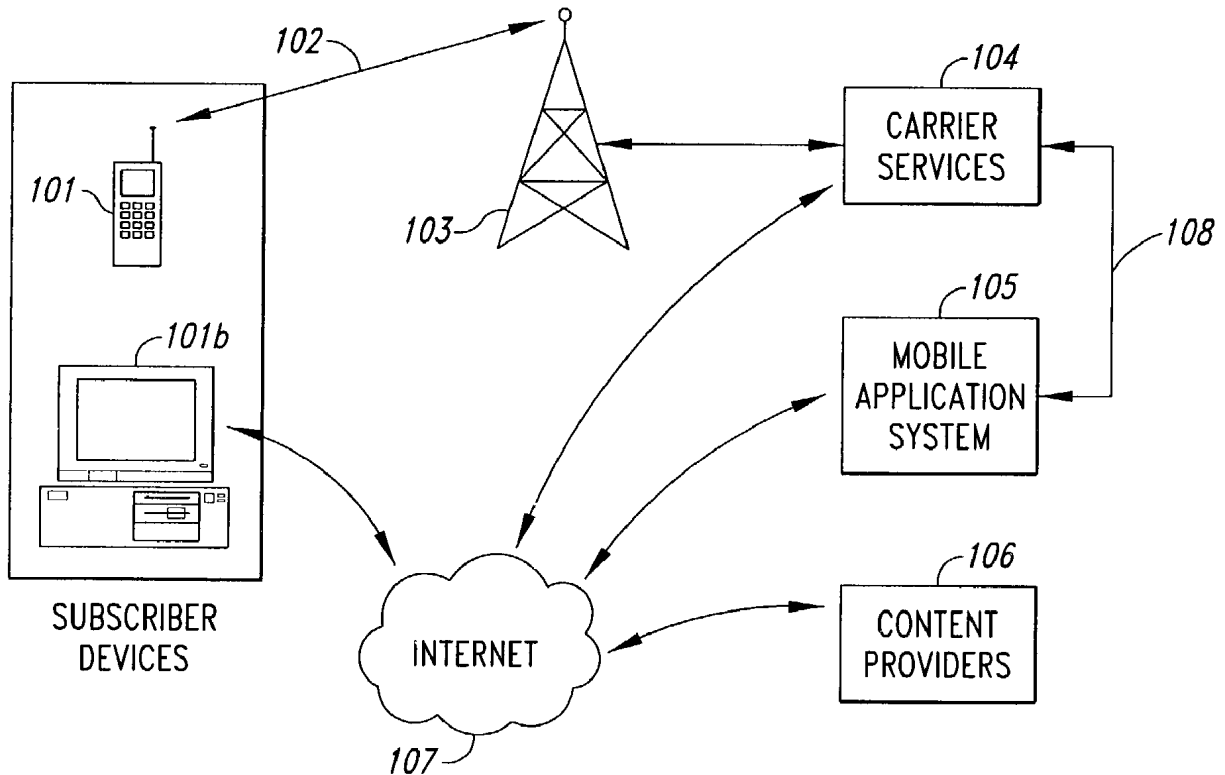
A. Ground 1: Mehta Anticipates Claims 1-4 and 8-11 of the '790 Patent

62. Mehta discloses each limitation of claim 1, as I explain below.

1. Claim 1

a. 1[pre]: “A method of providing access to content for use on wireless communication devices, the method comprising:”

63. To the extent that claim 1’s preamble is limiting, Mehta discloses the preamble. Mehta’s field of the invention states “[t]he present invention relates to a method and System for wireless applications and, in particular, to methods and systems for maintaining and distributing wireless applications to wireless devices over a wireless network. Ex. 1003 at [0002]. More specifically, Mehta discloses “methods and systems” (*e.g.*, “a Mobile Application System (MAS)”) for “provid[ing] applications, resources, and other content to mobile subscriber devices, such as wireless devices.” Ex. 1003 at [0005]; *see id.* at [0059], [0103], Abstract. Fig. 1 illustrates how subscribers of wireless services request and download applications from a MAS:



Ex. 1003 at Fig. 1. The MAS may be “on one or more general purpose computer systems and wireless networks.” Ex. 1003 at [0127]. Mehta states that “content” refers primarily to content in the form of applications and resources, “one skilled in the art will recognize that the content may contain text, graphics, audio, and video.” *Id.* at [0060]. “Applications may be written using a computer language, such as Java, which is capable of executing on a wide variety of subscriber devices.” *Id.* at [0064].

- b. 1[a][1]: “receiving and storing a plurality of items of content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers,”

64. Mehta discloses this limitation. For example, Mehta discloses that “[e]mbodiments of the present invention can [] be used to deploy applications and other content for wired subscriber devices,” and “[i]n this manner, applications, resources, and other content can be downloaded to devices, such as wireless devices, with greater assurance of their ability to successfully execute.” Ex. 1003 at [0005]. Mehta further discloses that “[t]he MAS is a collection of interoperating server components that work individually and together in a secure fashion to provide application, resources, and other content to mobile subscriber devices.” *Id.* at [0059]. The MAS “receive[s] applications from content providers and carrier services, to provision them for delivery to the subscriber devices,” and “the Mobile Application System 500 includes a Protocol Manager 503, Provisioning Manager 504, Cache 505, Deployment Manager 506, Billing Manager 507, Logging Manager 508, Administrator 509, and Heart beat Monitor 310.” *Id.* at [0068]. The applications received by the MAS correspond to “a plurality of items of content” of claim 1. This aligns with the ’790 patent, whose specification states that “[a]s used in this description, the terms ‘digital content’, ‘digital product’, ‘content’, and ‘product’ are used interchangeably and mean software and/or data embodying things such as games and other applications, applets or the like; images; screensavers; wallpaper; ring tones; etc[.]” Ex. 1001 at 3:48-56. The MAS may store the received applications “locally in a carrier’s application data repository [] which may be

located in the MAS.” “Applications may be written using a computer language, such as Java, which is capable of executing on a wide variety of subscriber devices.” Ex. 1003 at [0064]. Further, in Mehta, the one or more (plurality) of subscriber devices 101 communicate across the wireless network 102 to the wireless carrier services 104, whose services the subscriber has arranged to use. “One skilled in the art will recognize that the Mobile Application System 105 may be fully or partially integrated with the carrier services 104.” *Id.* at [0062].

- c. **1[a][2]: “including receiving a plurality of different implementations of at least one of the items of content, where each implementation of any given item of content corresponds to a different set of device capabilities; and,”**

65. Mehta discloses this limitation. Regarding “implementations,” the specification of the ’790 patent states that “[a]n implementation 57 can be simply a binary file (a ‘binary’) representing the product.” Ex. 1001 at 9:40-42. It also states that “any particular product may have multiple implementations published on the download manager, each of which may be designed for a different specific client device or set of client devices.” *Id.* at 9:45-48. This element of claim 1 recites that “each implementation . . . corresponds to a different set of device capabilities.” *Id.* at Cl. 1. In view of the ’790 citations discussed above and as further discussed below, a POSITA would understand that “implementations” of claim 1 would

include versions of digital content, where each version corresponds to a different set of device capabilities.

66. Mehta discloses that the MAS “receive[s] applications from content providers and carrier services, to provision them for delivery to the subscriber devices.” (Ex. 1003 at [0068]) and “store[s] and support[s] *functionally equivalent programs having the same name that are capable of running on multiple kinds of devices* that even may be written using different languages,” and “[t]he content provider may also select a subscriber category to which the submitted application belongs, suggest a price, list a Java profile, specify memory requirements, particular compatible devices, etc.” (*id.* at [0098]). Thus, the MAS receives, stores and supports functionally equivalent programs capable of running on multiple kinds of devices because each program corresponds to a different device having different device capabilities (*e.g.*, written using different languages). *Id.* at [0098]. Mehta describes that “[t]he device capability is also examined to determine whether the requested application can be run satisfactorily on the subscriber device,” and that “[t]he Device Verifier 602 determines the type and capabilities of the subscriber device from which the request was made and determines whether the device capabilities are sufficient to support a specific application.” *Id.* at [0064]. “The Device Verifier 602 determines the type and capabilities of the subscriber device from which the request was made and determines whether the device capabilities are

Sufficient to Support a specific application. ... [t]he device profile is examined to determine whether the device has the characteristics required by the requested application to execute properly on the Subscriber device.” *Id.* at [0085]. Thus, Mehta discloses element 1[a][2].

d. **1[b]: “maintaining a product catalog containing a description of the items of content, the product catalog including, in association with each item of content, a reference to each implementation of said item of content.”**

67. Mehta discloses this limitation. Mehta discloses that the MAS includes “a data repository” that “store[s]” applications. “The applications are stored locally in a carrier's application data repository (which may be located in the MAS or at the carrier's premises) or are optionally stored in trusted third party servers.” Ex. 1003 at [0064]. “As mentioned, one of the requests supported by the MAS is to retrieve a list of available applications that can be downloaded to the subscriber's device.” *Id.* at [0067] Mehta also discloses that “the content provider may include *a name and a short description of the application*” that are stored in the data repository. *Id.* at [0098]; *see also id.* (“additional information from the content provide[r] about the application . . . becomes part of an application profile when the application is approved”); *see also id.* at [0099] (“The Administrator uses the information Submitted by the content provider ... and the data generated during the inspection process to create an application profile, which is stored and maintained in a data

repository”). “[T]he MAS searches a data repository of published applications for those that meet criteria specified in the [subscriber] request.” *Id.* at [0067]. Thus, the data repository of Mehta stores applications along with information associated with the applications, such as a name and short description, and provides a search function to find applications that meet criteria specified in the subscriber request. In view of these teachings, a POSITA would have understood that Mehta’s “data repository” implements the ’790 patent’s “product catalog containing a description of the items of content” of claim 1.

68. In terms of “a reference to each implementation of said item of content” of this element of claim 1, the specification of the ’790 patent states that “[h]ence, any particular product entry in the catalog 54 can include references to multiple implementations of the product.” Ex. 1001 at 9:49-51. Mehta discloses that “[r]equests are made, for example, using Uniform Resource Locators (URLs).” and “the request to download a particular file is made by designating a URL that identifies a file (an application or service) to download.” Ex. 1003 at [0064]. Mehta further discloses “the Administrator can compare the APIs listed to the available device profiles to provide a list of devices that support these APIs to the content provider. The content provider can confirm that the application will run on all of the suggested target devices or can deselect those that should not be targeted.” *Id.* at [0097]. And “a content provider . . . enters *a reference* to the location of a file (*e.g.*,

a URL or other location *reference*) that the content provider desires to submit.” *Id.* (emphasis added). A POSITA would have understood that Mehta’s use of “a URL” or “other location reference” corresponds to the claimed “a reference to each implementation of said item of content” because Mehta’s “URL” or “other location reference” points to each application to be downloaded from the MAS or other designated location (as targeted by the URL).

2. Claim 2

a. 2[pre]: “A method of providing access to digital content for use on wireless communication devices, the method comprising:”

69. The analysis above for element 1[pre] of Ground 1 also applies to element 2[pre].

b. 2[a][1]: “receiving and storing in a server system a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers,”

70. The analysis above for element 1[a][1] of Ground 1 also applies to element 2[a][1].

c. 2[a][2]: “including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;”

71. The analysis above for element 1[a][2] of Ground 1 also applies to element 2[a][2].

- d. **2[b]: “operating the server system to maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;”**

72. The analysis above for element 1[b] of Ground 1 also applies to element 2[b].

- e. **2[c]: “receiving a request from a wireless device used by one of the subscribers;”**

73. Mehta discloses this limitation. For example, Mehta discloses “[a]pplication, resources, and other content is provisioned and verified by the MAS for authorized access by the subscriber, compatibility with a requesting subscriber device.” Ex. 1003 at [0005]. Mehta teaches that Fig. 1 “illustrates how subscribers of wireless services request and download software applications from a Mobile Application System.” Ex. 1003 at [0061]. As is evident from Fig. 1, reproduced below, the MAS 105 receives a request from a wireless device 101. *Id.* at [0060]. “FIG. 1 is an example block diagram that illustrates how Subscribers of wireless services request and download software applications from a Mobile Application System.” *Id.* at [0061]; *see also id.* at [0064] (“Steps 301-408 [shown in Fig 3] demonstrate how the MAS handles an incoming request to download an application from a subscriber device, provisions the requested application, and sends the requested application to the subscriber device.”).

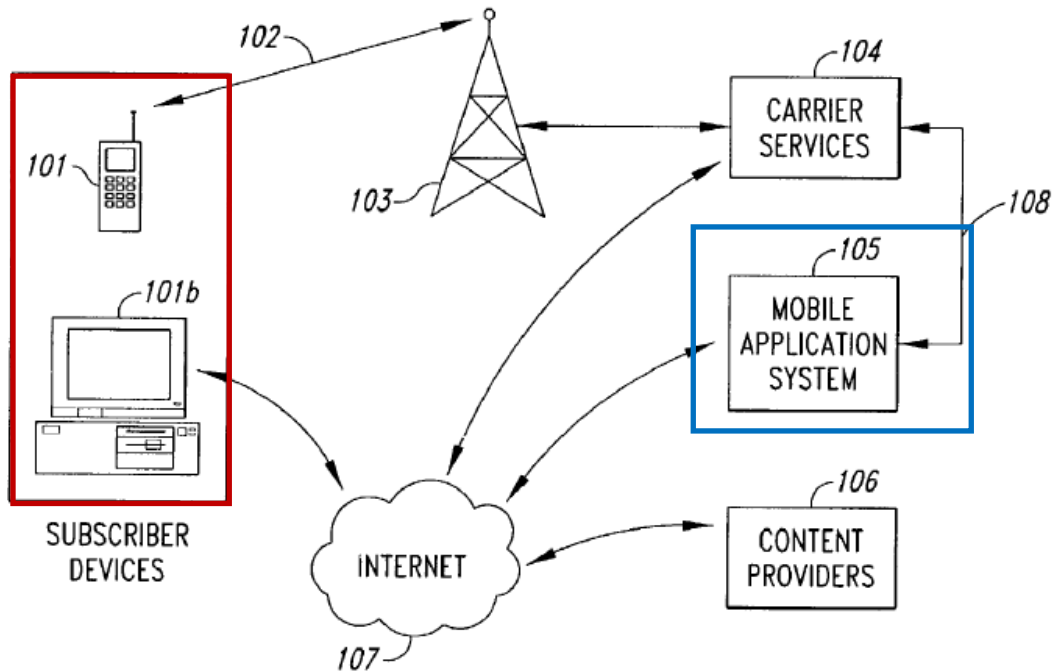


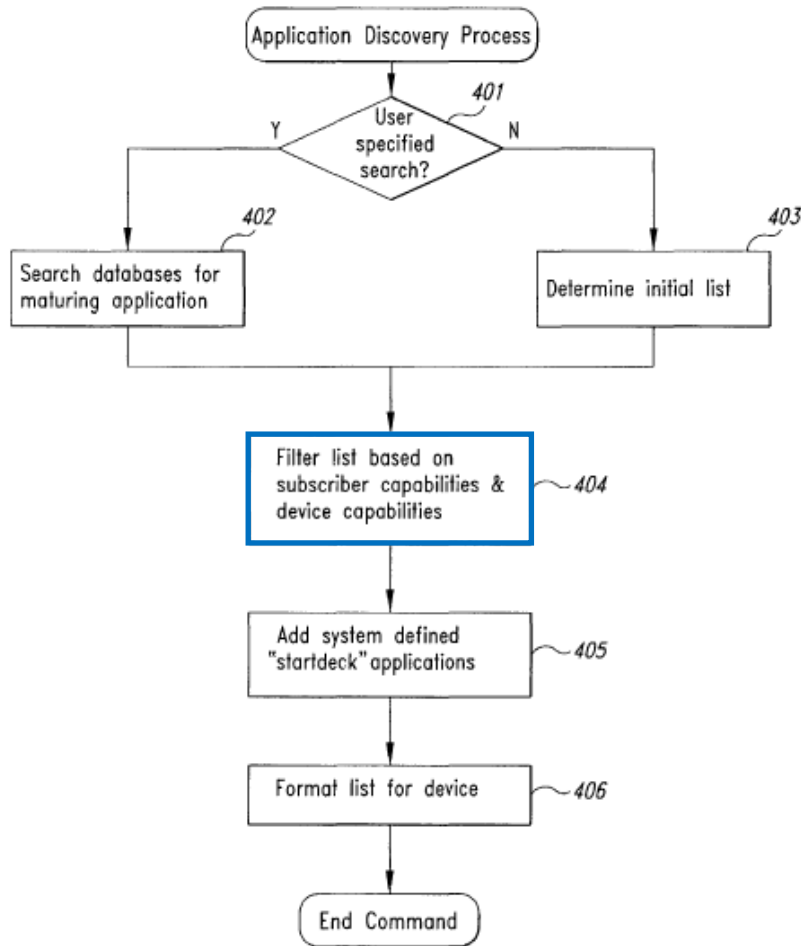
Fig. 1

Ex. 1003 at Fig. 1 (annotated).

- f. **2[d]: “in response to the request, selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and”**

74. Mehta discloses this limitation. For example, Mehta discloses “[i]n one embodiment, the verification that the device can support the content is determined by comparing an application profile associated with the content with a device profile that is associated with the subscriber's device.” Ex. 1003 at [0007]. Mehta further discloses that “[t]he device profile contains information relevant to *the capabilities of the subscriber device* such as memory capacity, processor type, processing speed, maximum size of a downloadable application, etc.” Ex. 1003 at [0139] (emphasis

added). “As mentioned, one of the requests supported by the MAS is to retrieve a list of available applications that can be downloaded to the subscriber's device.” Ex. 1003 at [0067]. Upon receiving a request from the subscriber, the MAS determines an initial list and “*filters this initial list based upon subscriber and device capabilities*” (as shown in step 404 of Fig. 4; reproduced below) to select a portion of the initial list to be presented to the subscriber. *Id.* at [0067] (emphasis added). The MAS analyzes various profiles such as “a subscriber profile, a device profile, and an application profile” stored in the data repository to determine whether the application's needs, as specified in the application profile, are met by the device, as specified in the device profile. Ex. 1003 at [0067]. Thus, Mehta explicitly discloses that in response to a request from the subscriber, the MAS selects a portion of the initial list to be presented to the subscriber based on the subscriber's device capabilities.

*Fig. 4*

Ex. 1003 at Fig. 4 (annotated).

- g. 2[e]: “presenting the selected portion of the product catalog to the subscriber via a wireless network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item.”

75. Mehta discloses this limitation. For example, Mehta discloses that “application discovery returns a list of content that can be downloaded that match

criteria that are designated by the subscriber.” Ex. 1003 at [0006]. Mehta explains that a “verification process for submitting content, for downloading content, and for application discovery comprises one or more of verifying that the subscriber is authorized to use the content ... verifying that the device can support the API and resource requirements of the content.” *Id.* at [0007]. As part of the verification process, Mehta teaches that “the list provided to the subscriber device during application discovery is filtered to display only content that has been verified according to these procedures” *Id.* In particular, “the MAS *only lists those applications that are supported by the subscriber’s device.*” *Id.* at [0117] (emphasis added).

76. Mehta also describes that “a subscriber browses to a site on a network, such as the Internet, and specifies a request to download content at a particular address, for example, a URL.” *Id.* at [0009]. “[T]he MAS provisions content for the subscriber ... the requested content is also verified for the subscriber’s device to increase the likelihood that the content will execute properly on the device.” *Id.* Additionally, “the MAS provides a command interface to the system, which supports application discovery, content downloading, and content downloading history,” (*id.* at [0016]), and “the MAS is invoked by a subscriber via the command interface ... to process two different types of input requests: discovery of applications and downloading of a requested application” (*Id.* at [0070]).

77. In addition, Mehta discloses two different embodiments for what is presented to a subscriber. The first presents a list of all available applications and the second presents only those that are compatible with the subscriber's device:

“In some embodiments, the MAS *lists all available applications* and indicates whether or not the subscriber's current service plan supports downloading of the application. In other embodiments, the MAS *only lists those applications that are supported by the subscriber's device*. *This allows the subscriber to avoid the problem of having to explicitly select a compatible application.*” *Id.* at [0117] (emphasis added).

In view of the last sentence in the above disclosure of Mehta, a POSITA would have understood that the MAS provides the subscriber with only a single subscriber-appropriate version that will work for the subscriber, so that the subscriber can “avoid the problem of having to explicitly select a compatible application.” Thus, Mehta explicitly discloses this limitation.

3. Claim 3

- a. 3[a]: “A method as recited in claim 2, wherein said selecting a portion of the product catalog comprises: in response to the request, determining the identity of the wireless device used by the subscriber, wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and”

78. Mehta discloses this limitation.³ For example, Mehta discloses “targets” of the invention, and that targets include a specific application or other content, a specific content provider, device type, or subscriber, or all such applications, content providers, devices, or subscribers. Ex. 1003 at [0010]. In particular, Mehta discloses that wireless devices and particular device capabilities are the targets of content (*see, e.g.*, Ex. 1003 at claims 1 and 10), and that “[t]he Subscriber Verifier 601 *determines the identity of the subscriber* from whom the request originated.” Ex. 1003 at [0084] (emphasis added). “The Device Verifier 602 *determines the type and capabilities of the subscriber device* from which the request was made and determines whether the device capabilities are sufficient to support a specific application . . . The device profile is examined to determine whether the device has the characteristics required by the requested application to execute properly on the subscriber device.” *Id.* at [0085] (emphasis added). A POSITA would have understood that determining the type and capabilities of the subscriber

³ I note that the word “identity” does not appear in the specification of the ’790 patent. In theory, a “device identity” could be, for example, a serial number that uniquely identifies a device, or a device type (*e.g.*, a model number, which would be associated with certain device capabilities). The ’790 patent does not disclose the former, but does disclose the latter, which is the basis of my invalidity analysis.

device in Mehta would correspond to “determining the identity of the wireless device used by the subscriber” of claim 3.

79. With respect to the limitation of previously associating each implementation with the recited device identity of this element of claim 3, Mehta discloses “[p]rovisioning, as it is discussed herein, is the customizing and distributing of content for a particular use, for example, for use on a particular kind of Subscriber device by a particular customer.” Ex. 1003 at [0059]. Mehta discloses the concept of pre-provisioning, explaining “[a] pre-provisioned application is an application that has been pre-customized according to the level of authorization and the capability of the subscriber device.” *Id* at [0065]. Further, Mehta teaches that “[t]he Deployment Manager 506 obtains applications and provisions *each application instance* for its intended (requested) use when an instance of an application is requested. It may also pre-deploy (‘pre-provision’) applications for *specific device and/or subscriber profiles by preparing applications for those profiles in advance* and storing the results for quick access in the cache 505, or other data repository,” and that “[t]he cache 505 is used to provide faster delivery of the requested application to the subscriber device.” Ex. 1003 at [0075] (emphasis added). Thus, Mehta explicitly discloses previously associating each application with device identity (*i.e.*, specific device and/or subscriber profiles) to provide faster delivery of the requested application to the subscriber device.

b. **3[b]: “selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.”**

80. Mehta discloses this limitation. As discussed above in paragraphs 78 and 79, which are incorporated by reference herein, the Device Verifier 602 in Mehta determines the type and capabilities—the identity—of the subscriber device. Ex. 1003 at [0085]. Mehta discloses that “the MAS filters the initial list based upon subscriber and device capabilities,” and the final list to be presented to the subscriber device is “*filtered to display only content that has been verified.*” *Id.* at [0007] (emphasis added). Mehta explains the initial list can be from a subscriber’s personalized list or a MAS generated default list, and that “the MAS filters this initial list based upon subscriber and device capabilities.” *Id.* at [0067]; *see also id.* at [0139], Fig. 18. Thus, Mehta expressly discloses that the MAS selects a portion of the initial list to be presented to the subscriber based on the type and capabilities (*i.e.*, identity) of the subscriber’s device.

4. **Claim 4**

a. **4[a]: “A method as recited in claim 2, further comprising: receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;”**

81. Mehta discloses this limitation. As discussed above in paragraphs 66 and 67, which are incorporated herein by reference, Mehta discloses that the MAS includes “a data repository” that stores applications and descriptions thereof, and

thus “a data repository” of Mehta corresponds to the “product catalog” of claim 1. Ex. 1003 at [0064] (“The applications are stored [] in data repository [] which may be located in the MAS”). As shown in Fig. 1 (reproduced below), “subscribers of wireless services [101, 101b] request and download software applications from a Mobile Application System [105].” *Id.* at [0061].

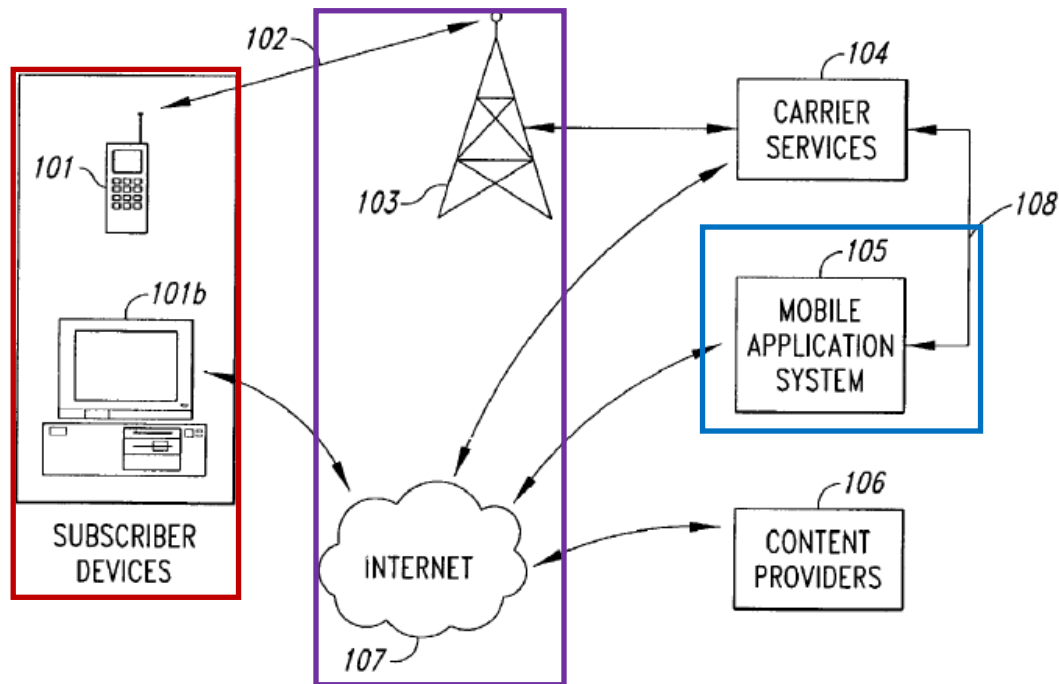


Fig. 1

Ex. 1003 at Fig. 1 (annotated). As shown above, the downloads are made possible via the wireless network 103 or the Internet 107, either of which can be used as communication pathways between the subscriber devices 101 and/or 101b, and the MAS 105.

82. Mehta discloses the subscriber making a content request, and when that input request “is a request to download a designated application, the MAS retrieves the application, verifies that it is appropriate and permitted for download to that device and user, provisions and packages the requested application, and sends the packaged application to the requesting subscriber device.” Ex. 1003 at [0070]. This verifies the subscriber request, and so Mehta explicitly discloses element 4[a].

b. 4[b]: “selecting an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and”

83. Mehta discloses this limitation. For example, Mehta discloses that upon receiving a request from the subscriber, the MAS determines an initial list and “*filters this initial list based upon subscriber and device capabilities*” to select an appropriate version of the requested item from the initial list. Ex. 1003 at [0067] (emphasis added). As part of this process, Mehta explains “the MAS may analyze various profiles, for example a subscriber profile, a device profile, and an application profile to determine whether the subscriber is authorized to use the application and whether the application's needs, as reflected in the application profile, are met by the device, as reflected in the device profile.” Ex. 1003 at [0067]. Mehta further explains “the Verify Device routine compares the device profile associated with the subscriber's device to the application profile for the requested application and verifies that the resources required by the application are available according to the

device profile.” *Id.* at [0139]. Thus, Mehta discloses that the MAS selects an appropriate version of the requested application based on the capabilities of the subscriber’s device.

c. 4[c]: “downloading the selected implementation of the item of digital content to the wireless device used by the subscriber.”

84. Mehta discloses this limitation. For example, Mehta discloses that, using the MAS, “applications, resources, and other content can be downloaded to [subscriber] devices, such as wireless devices.” Ex. 1003 at [0005]. Figure 3 of Mehta shows that “[i]n [step] 309, the [selected] application is provisioned for the specific subscriber device . . . [i]n step 310, the MAS sends off the provisioned application to the subscriber device for *downloading*” (*id.* at [0066]) (emphasis added). Moreover, Mehta explains that downloads are tracked after the fact, disclosing “[t]he subscriber profiles maintain lists of published applications that have been downloaded by each subscriber.” *Id.* at [0108]. Thus, Mehta explicitly discloses that the MAS downloads the selected and provisioned application to the subscriber device.

5. Claim 8

85. Mehta anticipates claim 8 in view of substantially the same evidence of anticipation for claim 2.

a. 8[pre]: “A system comprising:”

86. The analysis provided for element 2[pre] of Ground 1, *e.g.*, “a Mobile Application System (MAS),” also applies to element 8[pre]. Ex. 1003 at [0005].

b. 8[a]: “a network interface through which to communicate over a communication network; and”

87. Mehta discloses this limitation. For example, referring to Fig. 1 (as reproduced in paragraph 81 above), Mehta discloses “[t]he wireless environment in which the MAS operates includes subscriber devices 101 and 101b, wireless network 102 with transceiver 103, wireless carrier services 104” (Ex.1003 at [0061]), and that the MAS 105 “*communicates* with the carrier services 104, for example, *across a high bandwidth communications channel 108 or a publicly accessible network, such as the Internet 107*, to provide provisioned applications to the subscriber devices 101.” *Id.* at [0062] (emphasis added); *see also id.* at [0077] (“the application is . . . transmitted to the customer as outgoing data 502”). In view of the above disclosure of Mehta, a POSITA would have understood that the MAS 105 would inherently employ a network interface for communicating through the chosen network (103 or 107) with the subscriber devices 101. I am informed that to anticipate a claim, a single prior art reference must expressly or inherently disclose each claim limitation, and it is my opinion that inherency applies to Mehta for this claim element.

c. **8[b][1]: “a download manager to receive and store a plurality of items of content to be made available for use in wireless communication devices used by a plurality of wireless telecommunications subscribers,”**

88. The analysis provided for element 2[a][1] of Ground 1 also applies to element 8[b][1]. Additionally, with respect to the limitation “a download manager to receive and store a plurality of items of content,” Mehta discloses that “[c]ontent providers 106 provide applications to the MAS 105, through or by permission of the carrier services 104. The applications are then verified, published, and provisioned to the subscriber devices 101 by the MAS 105 when requested.” Ex. 1003 at [0061]. Moreover, the MAS “receive[s] applications from content providers and carrier services” (*id.* at [0068]) and the MAS includes “Applications Store 1216” that is “a data repository that stores applications suitable for downloading to the subscriber device 1201” (*id.* at [0131]). Mehta also discloses that one or more subscribers communicate across the wireless network. *Id.* at [0062]. In view of this disclosure of Mehta, a POSITA would have understood that the MAS of Mehta would correspond to “a download manager” that provides content items used “by a plurality of wireless telecommunications subscribers” as recited in claim 8.

d. **8[b][2]: “including receiving a plurality of different implementations of at least one of the items of content, where each implementation of any given item of content corresponds to a different set of device capabilities; and,”**

89. The analysis above for element 2[a][2] of Ground 1 also applies to element 8[b][2].

- e. **8[c]: “maintain a product catalog containing a description of the items of content, the product catalog including, in association with each item of content, a reference to each implementation of said item of content.”**

90. The analysis above for element 2[b] of Ground 1 also applies to element 8[c].

6. Claims 9-11 based on Mehta

91. Claim 9 and its dependent claims 10 and 11 are anticipated in view of the same evidence of anticipation for claim 2 and its dependent claims 3 and 4.

92. The evidence identified above for element 2[pre], such as “a Mobile Application System (MAS),” meets **Element 9[pre]**. Ex. 1003 at [0005].

93. With respect to **Element 9[a]**, “a processor,” Mehta discloses various processors used in the MAS. *See id.* at [0080], [0127], [0131], claim 45. For example, Mehta explains that “FIG. 12 is an example block diagram of a general purpose computer system and a subscriber device for practicing embodiments of the Mobile Application System” (Ex. 1003 at [0128]), and “a CPU 1213” of the general purpose computer system 1200 operating the MAS is shown in Fig. 12, which is reproduced below:

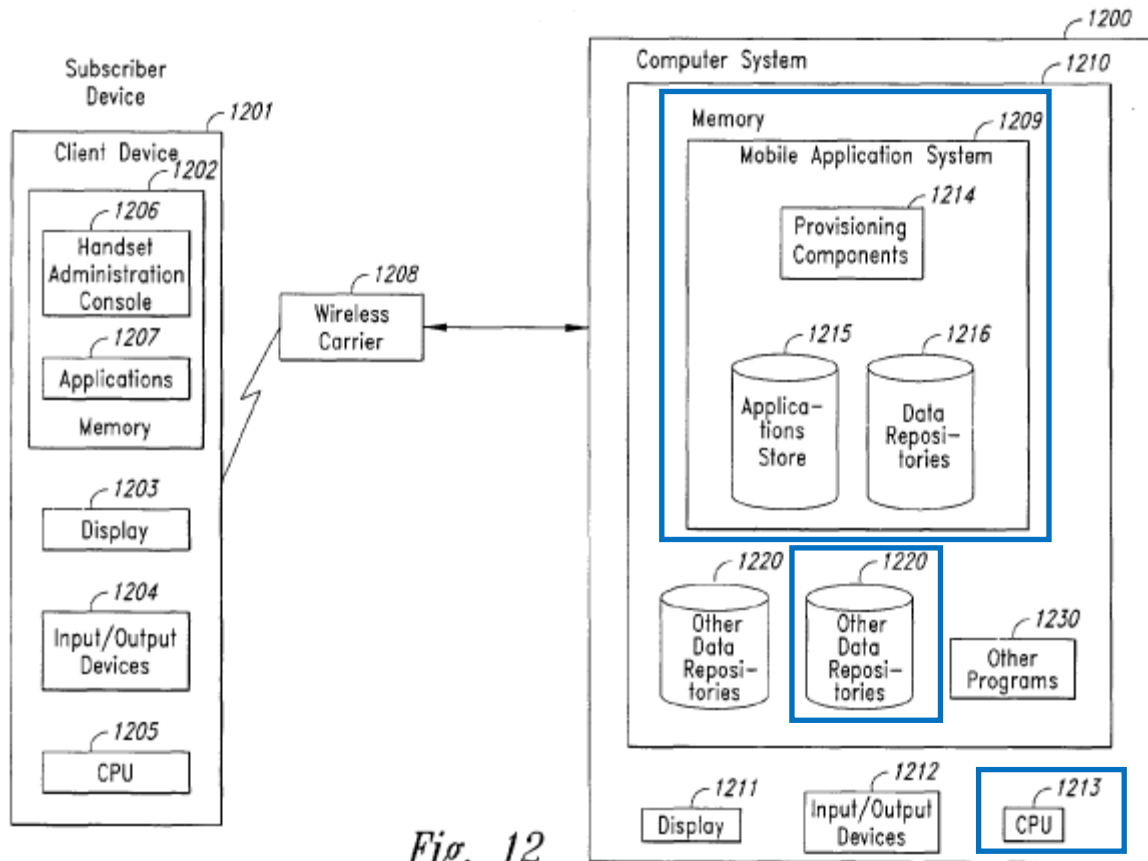


Fig. 12

Ex. 1003 at Fig. 12 (annotated); *see id.* at [0131].

94. The analysis provided for element 2[a][1] also meets **Element 9[b][1]**, “a storage facility.” For example, Mehta discloses “a memory 1210” of the general purpose computer system 1200 operating the MAS. Ex. 1003 at [0131], Fig. 12. It also references “other data repositories” 1220. Ex. 1003 at [0131].

95. The analysis provided for elements 2[a][2], 2[b], 2[c], 2[d], and 2[e] meets **Elements 9[b][2], 9[c], 9[d], 9[e], and 9[f], respectively.**

96. The analysis provided for claim 3, such as Mehta’s disclosure of filtering the initial list to display only content that has been verified, meets

Dependent claim 10. Ex. 1003 at [0007], [0067], [0139]. Similarly, the evidence identified for claim 4, such as Mehta’s disclosure of filtering the initial list based upon subscriber and device capabilities, meets **Dependent claim 11.** Ex. 1003 at [0067].

B. Ground 2: Mehta and Schlapfer Render Obvious Claims 1-14 of the ’790 Patent

97. Mehta (Ex. 1003) in combination with Schlapfer (Ex. 1009) renders obvious claims 1-14 of the ’790 patent. Ground 2 is not duplicative of Ground 1 because it is the only Ground based on Mehta and Schlapfer.

1. Claim 2

98. Mehta (Ex. 1003) in combination with Schlapfer (Ex. 1009) renders obvious claim 2 of the ’790 patent. As discussed for Ground 1, it is my opinion that Mehta discloses all of the elements of claim 2. However, to the extent that Patent Owner asserts that Mehta does not provide adequate disclosure of the element “provid[ing] only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item” of element 2[e], this limitation is obvious in light of the combination of Mehta and Schlapfer. As discussed below, Schlapfer, which was not disclosed or cited to the Patent Office during prosecution, teaches that the mobile devices have a small display and limited processing and program execution capabilities, and often have to operate within

limited bandwidth network communications facilities, which when combined with Mehta, renders element 2[e] obvious in view of the combination.

a. **2[pre]: “A method of providing access to digital content for use on wireless communication devices, the method comprising:”**

99. The analysis above for element 2[pre] of Ground 1 also applies to element 2[pre].

b. **2[a][1]: “receiving and storing in a server system a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers,”**

100. The analysis above for element 2[a][1] of Ground 1 also applies to element 2[a][1].

c. **2[a][2]: “including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;”**

101. The analysis above for element 2[a][2] of Ground 1 also applies to element 2[a][2].

d. **2[b]: “operating the server system to maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;”**

102. The analysis above for element 2[b] of Ground 1 also applies to element 2[b].

- e. **2[c]: “receiving a request from a wireless device used by one of the subscribers;”**

103. The analysis above for element 2[c] of Ground 1 also applies to element 2[c].

- f. **2[d]: “in response to the request, selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and”**

104. The analysis above for element 2[d] of Ground 1 also applies to element 2[d].

- g. **2[e]: “presenting the selected portion of the product catalog to the subscriber via a wireless network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item.”**

105. As discussed above in paragraph 74, which is incorporated by reference herein, Mehta discloses that upon receiving a request from the subscriber, the MAS filters the initial list based upon subscriber and device capabilities to select a portion of the list to be presented to the subscriber. Ex. 1003 at [0067]; *see also id.* (“[T]he MAS supplies a default list ... the MAS filters this initial list based upon subscriber and device capabilities.”). Mehta discloses that “the verification that the device can support the content is determined by comparing an application profile associated with the content with a device profile that is associated with the subscriber's device ... *the list provided to the subscriber device during application discovery is filtered*

to display only content that has been verified according to these procedures.” Id. at [0007] (emphasis added). Mehta further describes that “the MAS only lists those applications that are supported by the subscriber's device.” *Id. at [0117].*

106. However, to the extent Patent Owner asserts that Mehta does not explicitly disclose the element of 2[e] reciting “provid[ing] only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item,” this requirement is obvious in light of the combination of Mehta and Schlapfer. Mehta discloses that in some embodiments the MAS lists all available applications, but in other embodiments “the subscriber [could] *avoid the problem of having to explicitly select a compatible application*” when the MAS only lists the applications that are supported by the subscriber's device. *Id. at [0117] (emphasis added).* Further, Schlapfer describes that the mobile devices are a family of devices that have a common set of characteristics, such as “*a small display . . . and are capable of communicating via a mobile network with limited bandwidth*” (Ex. 1009 at 7 (emphasis added)), and have “simple user interfaces, minimum memory budgets ... and low-bandwidth intermittent network connections” (*id.*, at 5). So it was well known to a POSITA at the time of the alleged invention that the available screen space, signal processing and memory capabilities of mobile devices were limited, and that implementations and utility of devices within wireless infrastructures had to be constrained accordingly, including

accommodating limited bandwidth and intermittent networks. *See also* Ex. 1010 (Gidron) at 1:59-63 (“Cellular telephones have limited resources, and as such can be considered to be limited resource devices. They are *limited by* at least one of *available memory, storage space, size of the display screen, and/or computational power*, as represented by the ability to perform various data processing tasks.”) (emphasis added).

107. An additional reason the above constraint factors would have made this claim element obvious is suggested by Mehta’s disclosure that “applications that generate more revenue may be given ‘premium’ viewing time by placing them at the top of the list.” Ex. 1003 at [0067]. The POSITA would have known that it was common at the time of the alleged invention for HDTV programming to be provided at a price premium over SDTV programming. With limited screen display size, it would have been obvious to follow Mehta’s teaching to show only (or at least at first) HDTV programming descriptions in order to generate more revenue. And yet another reason the POSITA would find this element obvious is Mehta’s further disclosure that “the MAS formats the list according to the viewing capabilities of the requesting device (for example, the markup language supported).” *Id.* The POSITA would have understood that displaying a plurality of different viewing capabilities (*e.g.*, languages) to a user and expecting the user to select which was appropriate for the user’s device would likely be very confusing.

108. In view of Mehta’s teaching to avoid the problem of having to explicitly select a compatible application, by only listing the applications that are supported by the subscriber’s device, together with Schlapfer’s teaching of limited screen space, signal processing and memory of the mobile devices and limited bandwidth of the mobile network, “provid[ing] only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item” of element 2[e] would have been obvious to a POSITA at the time of the alleged invention.

2. Claim 3

- a. **3[a]: “A method as recited in claim 2, wherein said selecting a portion of the product catalog comprises: in response to the request, determining the identity of the wireless device used by the subscriber, wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and”**

109. The analysis above for element 3[a] of Ground 1 also applies to element 3[a].

- b. **3[b]: “selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.”**

110. The analysis above for element 3[b] of Ground 1 also applies to element 3[b].

3. Claim 4

- a. 4[a]: “A method as recited in claim 2, further comprising: receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;”

111. The analysis above for element 4[a] of Ground 1 also applies to element 4[a].

- b. 4[b]: “selecting an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and”

112. The analysis above for element 4[b] of Ground 1 also applies to element 4[b].

- c. 4[c]: “downloading the selected implementation of the item of digital content to the wireless device used by the subscriber.”

113. The analysis above for element 4[c] of Ground 1 also applies to element 4[c].

4. Claim 5

114. Mehta discloses all of the elements of claim 5, except for “a corresponding set of provisioning attributes and descriptors” of element 5[b]. As discussed below, Schlapfer describes provisioning as the process used to download and deploy applications to the recipient mobile device, and also discloses an application descriptor and its attributes. Ex. 1009 at 7, 8, 11.

- a. 5[a]: “A method as recited in claim 4, further comprising associating each of the items of digital content in the

server system with a plurality of different provisioning models, each of the provisioning models corresponding to a different set of device capabilities,”

115. The ‘790 patent discloses that a “provisioning model” “includes a particular provisioning protocol and a content packaging format.” Ex 1001 at 13:1-3. Mehta discloses that “[p]rovisioning, as it is discussed herein, is the customizing and distributing of content for a particular use, for example, *for use on a particular kind of subscriber device* by a particular customer.” Ex. 1003 at [0059] (emphasis added). Mehta also discloses that the customizing and distributing of content includes accommodation for different communications requirements (provisioning protocol) according to subscriber device. *Id.* “Provisioning includes ... packaging, and ... steps as needed to ready an application for downloading to a target device,” and “[p]rotocol conversions are performed on incoming requests (and outgoing messages) to enable communications with subscriber devices across a wide variety of wireless carriers.” *Id.* at [0064]. Further, “[p]rotocol conversion ensures that the MAS 500 can communicate with any subscriber device (wired or wireless), independent of the communication protocol used in the network.” *Id.* at [0071]. “[T]he Device Verifier 602 [in Provisioning Manager 600, as shown in Fig. 6] determines *the type and capabilities of the subscriber device* from which the request was made and determines whether the device capabilities are sufficient to support a specific application.” *Id.* at [0085] (emphasis added), Fig. 6. Mehta then discloses

four different types of provisioning models (*i.e.*, “walled-garden provisioning,” “open provisioning,” “static provisioning,” and “dynamic provisioning”). *Id.* at [0008], [0009], [0061], [0131].

116. In view of these teachings, a POSITA would have understood that it would have been obvious to associate each of the items of digital content in the server system with a plurality of different provisioning models, because Mehta describes that “[p]rovisioning . . . is the customizing and distributing of content . . . *for use on a particular kind of subscriber device* by a particular customer” while disclosing at least four different types of provisioning models, and the MAS of Mehta handles a different set of device capabilities. Ex. 1003 at [0059], [0085], [0131] (emphasis added). For these reasons, Mehta discloses element 5[a].

b. 5[b]: “each provisioning model including a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.”

117. With respect to distribution of content using “a provisioning protocol” of element 5[b], in addition to the communications protocol accommodations recited in element 5[a] above, which is incorporated by reference herein, Mehta discloses “[p]rotocol conversions are performed on incoming requests (and outgoing messages) to enable communications with Subscriber devices across a wide variety of wireless carriers.” (Ex. 1003 at [0064]) and that “[a]n example Protocol Manager 503 has built-in support for *WAP and HTTP protocols* and can be extended using

well-known techniques to provide support for additional formats and *protocols*” (*id.* at [0071] (emphasis added)).

118. To the extent Patent Owner asserts that Mehta does not explicitly disclose “a corresponding set of provisioning attributes and descriptors” of element 5[b], this limitation is disclosed by Schlapfer. It was well known to a POSITA at the time of the alleged invention that a provisioning model would include a corresponding set of provisioning attributes and descriptors. For example, section 4.4. of Schlapfer describes provisioning of MIDlets, which are applications written according to MIDP. Ex. 1009 at 7. Schlapfer also discloses “[a] so called Over the Air (OTA) User Initiated Provisioning Recommended Practice [16] was prereleased in April 2001 by the Java Community Process (JCP). This recommendation is an appendix to the MIDP specification, and describes how MIDlet suites can be deployed over the air, and the functions the devices should provide to support these deployments.” *Id.* at 11; *see also id.* at Figure 2. A number of MIDlets can be contained in a single jar file that is optionally accompanied by “*an application descriptor.*” *Id.* at 7 (emphasis added). “An application descriptor is a text file containing selected information from the manifest file, together with the total size of the jar file” and used “to determine whether the terminal is capable of running the application.” *Id.* at 7, 8. The file extension of this application descriptor is .jad, and includes mandatory *attributes* such as name, version, vendor, jar URL, and jar size.

Id. (emphasis added); *see also id.* at 8 (listing optional *attributes* such as description, icon, info URL, data size) (emphasis added).

119. In light of these teachings of the combination of Mehta and Schlapfer,, element 5[b] would have been obvious to a POSITA at the time of the alleged invention.

5. Claim 6

- a. **6[a]: “A method as recited in claim 5, further comprising: receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;”**

120. The analysis provided for element 4[a] of Ground 2 also applies to element 6[a].

- b. **6[b]: “identifying device capabilities of the wireless device used by the subscriber;”**

121. Mehta discloses this limitation. As discussed above in conjunction with claim 4 element b, the discussion of which is incorporated by reference herein, Mehta discloses that in response to “the subscriber send[ing] a request to download an application [in step 302],” “the subscriber's request is *verified for* authorization, *device capability*, and if appropriate, pre-paid billing authorization [in step 306].” Ex. 1003 at [0064] (emphasis added). “The device capability is also examined to determine whether the requested application can be run satisfactorily on the subscriber device.” *Id.* Thus, Mehta explicitly discloses identifying device capabilities of the subscriber’s device.

- c. **6[c]: “selecting one of a plurality of provisioning models associated with the requested item in the server system, based on the device capabilities of the wireless device used by the subscriber;”**

122. Mehta discloses this limitation. As discussed above in paragraph 115, and in conjunction with element 5[a], which are incorporated by reference herein, Mehta discloses four different types of provisioning models: “walled-garden provisioning,” “open provisioning,” “static provisioning,” and “dynamic provisioning.” Ex. 1003 at [0008], [0009], [0061], [0131]. When “the MAS determines [] the designated URL specifies a published application,” “*walled-garden provisioning* is [] performed [] and . . . the subscriber’s request is verified for authorization, *device capability*[.]” *Id.* at [0064] (emphasis added). Thus, Mehta discloses that the MAS selects an appropriate provisioning model based on the device capabilities.

123. For another example, Mehta discloses pre-provisioning as “[a] pre-provisioned application is an application that has been pre-customized according to the level of authorization and the capability of the subscriber device.” Ex. 1003 at [0065]. Mehta further discloses that “[t]he applications may be pre-provisioned (*‘static provisioning’*) for quick downloading to the subscriber device 1201, or the applications may be provisioned upon request (*‘dynamic provisioning’*). The Data Repositories 1215 provide data repository and retrieval services to establish levels of subscription and *device capabilities* (to host the profiles used in profile

management) and to determine applications suitable for each customer device.” Ex. 1003 at [0131] (emphasis added). For these reasons, Mehta explicitly discloses element 6[c].

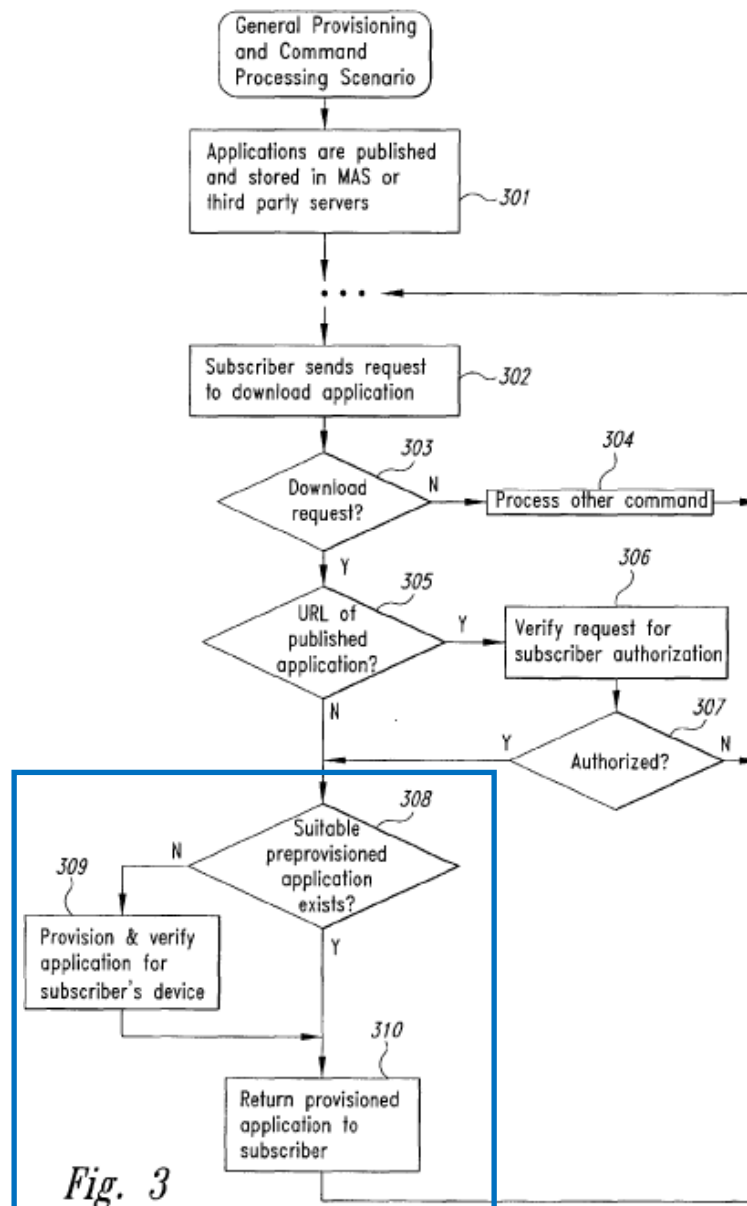
d. 6[d]: “packaging the requested item according to the selected provisioning model; and”

124. Mehta discloses this limitation. For example, Mehta discloses that “[d]uring the provisioning process, the inspected, optimized, or instrumented content can be packaged appropriate to the requesting device,” (Ex. 1003 at [0012]) and that “[i]n one embodiment, *provisioning* includes application code inspection, optimization, instrumentation, and *packaging*” (*id.* at [0015] (emphasis added)). Further, Mehta discloses that “instructions can be associated with the request that will later direct the Protocol Manager ... to package the request for a custom protocol. *Id.* at [0088]. Thus, Mehta explicitly discloses packaging the requested content according to the selected provisioning process.

e. 6[e]: “provisioning the requested item in the wireless device used by the subscriber according to the selected provisioning model.”

125. Mehta discloses this limitation. As discussed above in paragraphs 115 and 122-123, and in conjunction with elements 5[a], 6[c] and 6[d], which are incorporated by reference herein, Mehta discloses that when “the MAS determines [] the designated URL specifies a published application,” “*walled-garden provisioning* is [] performed [as a selected provisioning model].” Ex. 1003 at [0064]

(emphasis added). Mehta also discloses that “[t]he applications may be pre-provisioned (*‘static provisioning’* [as a selected provisioning model]) for quick downloading to the subscriber device 1201, or the applications may be provisioned upon request (*‘dynamic provisioning’* [as a selected provisioning model]).” *Id.* at [0131] (emphasis added). Figure 3, included below, shows that “[i]n [step] 309, the application is provisioned for the specific subscriber device . . . [i]n step 310, the MAS sends off the provisioned application to the subscriber device for downloading.” *Id.* at [0066]. For these reasons, Mehta explicitly discloses element 6[e].



Ex. 1003 at Fig. 3 (annotated).

6. Claim 7

- a. 7[a]: "A method as recited in claim 6, wherein: said packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item; and"

126. Mehta discloses this limitation. Mehta discloses that “[d]uring the provisioning process, the inspected, optimized, or instrumented content can be packaged appropriate to the requesting device.” Ex. 1003 at [0012] (emphasis added). As discussed above in paragraph 118, which is incorporated by reference herein, while Patent Owner may argue that Mehta does not expressly disclose “a provisioning descriptor,” Section 4.4. of Schlapfer discloses defining and controlling MIDlets (Ex. 1009 at 7, 12), and that a number of MIDlets can be contained in a single jar file that is optionally accompanied by “an application descriptor” (*id.* at 7) (emphasis added). “An application descriptor is a text file containing selected information from the manifest file, together with the total size of the jar file” and used “to determine whether the terminal is capable of running the application.” *Id.* at 7, 8. Schlapfer also discusses the provisioning of MIDlets and MIDlet suites for over-the-air applications: “[a] so called Over the Air (OTA) User Initiated Provisioning Recommended Practice ... was pre-released in April 2001 by the Java Community Process (JCP). This recommendation is an appendix to the MIDP specification, and describes how MIDlet suites can be deployed over the air, and the functions the devices should provide to support these deployments.” *Id.* at 11.

127. Moreover, in conjunction with Fig. 27, Mehta describes that “[i]n step 2701, the routine accesses the retrieved subscriber device profile to determine compatible file formats for the identified subscriber device,” and “[i]n step 2704, the

[Package Application] routine *packages* the application *using a determined file format by encapsulating the provisioned application with information* sufficient to enable the Handset Administration Console (See, for example, the Handset Administration Console of FIG. 2) executing on a wireless device to extract the application.” Ex. 1003 at [0148] (emphasis added) Additional encapsulated information for billing and routing is disclosed: “[t]he Billing Manager ... also relies on the encapsulating information for billing and routing purposes.” *Id.* A POSITA would have understood that the information encapsulating the provisioned application in Mehta would correspond to “a provisioning descriptor” of claim 7, and Mehta’s use of such information during the packaging process would correspond to “associating the provisioning descriptor with the requested item” of claim 7. In light of these teachings, the combination of Mehta and Schlaffer would have rendered element 7[a] obvious to a POSITA at the time of the alleged invention.

7[b]: “said provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.”

128. Mehta discloses this limitation. For example, Mehta acknowledges that there may be variations in transmission requirements for communicating in the network of Fig. 1: “[t]ransceiver 103 typically communicates with the carrier services 104 across a cable-based medium using a carrier-specific communication

protocol.” Ex. 1003 at [0062]. More specifically, and in addition to the citations included for element 5[a] above, which are incorporated by reference herein, Mehta discloses that “when input request 501 [as shown in Fig. 5 reproduced below] is a request to download a designated application, the MAS [500] retrieves the application, verifies that it is appropriate and permitted for download to that device and user, provisions and packages the requested application, and *sends the packaged application to the requesting subscriber device.*” Ex. 1003 at [0070] (emphasis added). Mehta also discloses that “the Protocol Manager [503 shown in Fig. 5 below] encodes/translate[s] the outgoing data message *according to the determined protocol.*” *Id.* at [0134] (emphasis added). Thus, Mehta explicitly discloses element 7[b].

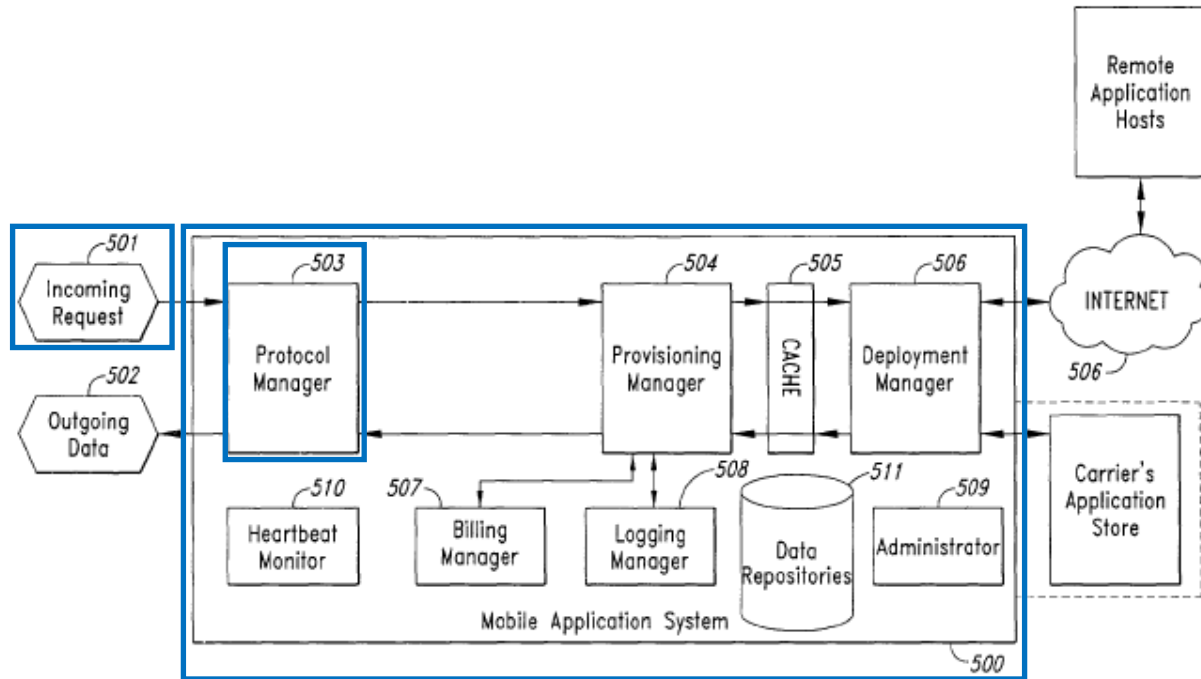


Fig. 5

Ex. 1003 at Fig. 5 (annotated).

7. Claims 9-14 in View of Mehta and Schlapfer

129. Claim 9 and its dependent claims are obvious in light of the evidence discussed above for claim 2 and its dependent claims.

130. The analysis provided for element 2

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, such as “a Mobile Application System (MAS),” also applies to Element 9

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. Ex. 1003 at [0005].
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131. As I discussed in connection with **Element 9**

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 for Ground 1, which evidence is incorporated herein, Mehta discloses the processor limitation. Mehta discloses various processors used in the MAS. See id. at [0080], [0127], [0131],
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claim 45. For example, “a CPU 1213” of the general purpose computer system 1200 operating the MAS is shown in Fig. 12, which is reproduced below:

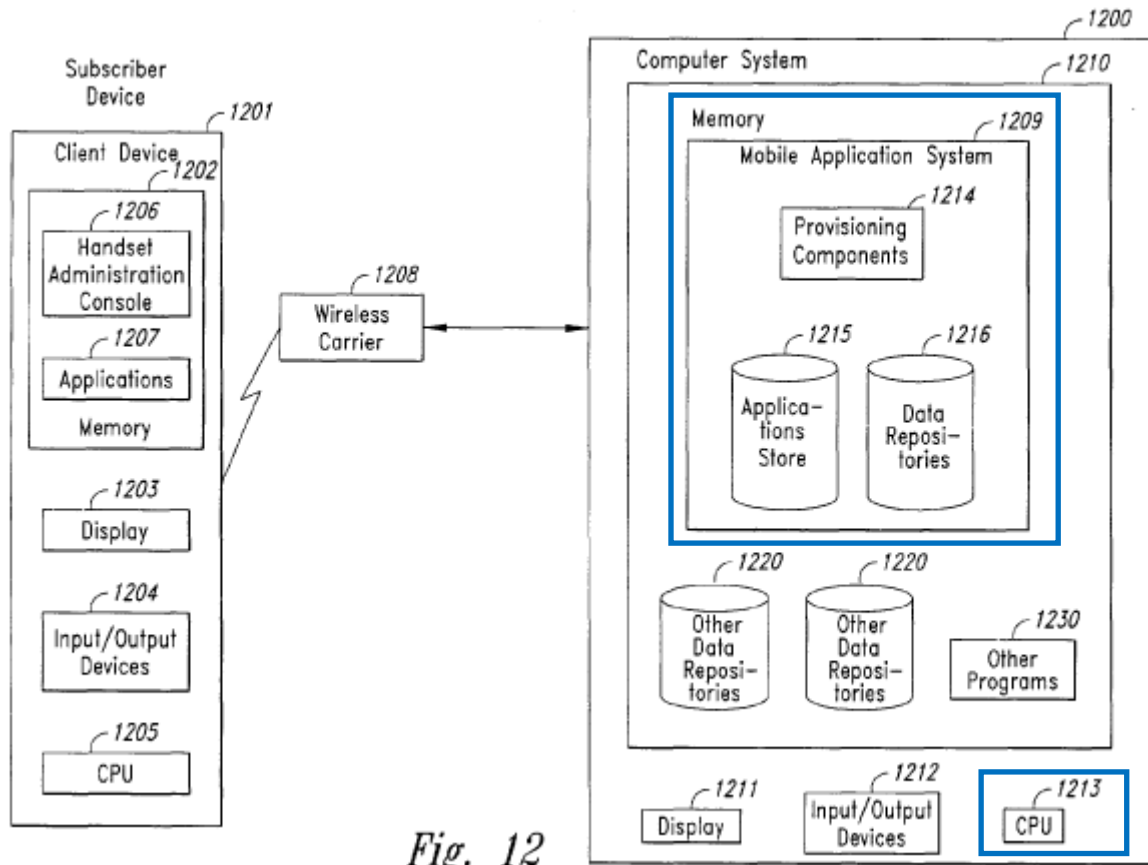


Fig. 12

Ex. 1003 at Fig. 12 (annotated); *see id.* at [0131].

132. The evidence identified for element 2[a][1] meets **Element 9[b][1]**. With respect to “a storage facility,” Mehta discloses “a memory 1210” of the general purpose computer system 1200 operating the MAS. Ex. 1003 at [0131], Fig. 12.

133. The evidence and analysis for elements 2[a][2], 2[b], 2[c], 2[d], and 2[e] also meets **Elements 9[b][2], 9[c], 9[d], 9[e], and 9[f], respectively.**

134. Similarly, the evidence and analysis provided in conjunction with claims 3, 4, 5, 6, and 7 also meets **Dependent claims 10, 11, 12, 13, respectively**.

8. Claims 1 and 8 in view of Mehta and Schlapfer

135. As discussed above for Ground 1, which is incorporated by reference herein, the elements of claims 1 and 8 are disclosed by Mehta.

9. Motivation to Combine

136. The POSITA would have been motivated to combine the digital content provisioning features of Mehta and Schlapfer. For example, a POSITA would have found it obvious to combine Mehta's teachings of a MAS with Schlapfer's provisioning teachings for the limited processing power, memory and screen space of mobile devices, and use of an application descriptor and associated attributes.

137. First, a POSITA would have looked to Schlapfer because it is analogous art to Mehta. Ex. 1003 at [0002] (the invention relates to "maintaining and distributing wireless applications to wireless devices over a wireless network"); Ex. 1009 at 11 ("the user should be able to download applications to the mobile device on the go to keep the wireless experience" via "Over the Air (OTA) User Initiated Provisioning"). Both Mehta and Schlapfer are directed to distributing digital content to mobile devices over a wireless network. *See* Ex. 1003 at [0002, 0005]; Ex. 1009 at 3, 11, 12.

138. Second, Mehta itself provides motivation to look to Schlapfer. Mehta recognizes the issue of resource constraints on mobile devices and considers steps to address those constraints. For example, Mehta describes “optimizing the content for smaller size and greater speed,” Ex. 1003 at [0010], and packaging content so that “the packaging compresses the content,” *id.* at [0012]. Similarly, it was well known to a POSITA at the time of the alleged invention that mobile devices had limited screen space. Ex. 1009 at 7. (“MIDP ... addresses a family of devices that have a common set of characteristics: they have a small display ... and are capable of communicating via a mobile network with limited bandwidth.”). *See also* Ex. 1010 at 1:59-63 (“Cellular telephones have limited resources, and as such can be considered to be limited resource devices. They are *limited by* at least one of available memory, storage space, *size of the display screen*, and/or computational power, as represented by the ability to perform various data processing tasks.”) (emphasis added); Ex. 1013 at 6:33-39 (“Designed to closely model the World-Wide Web architecture, specifications of, for example, the standard naming model, content typing, content formats, protocols, etc., have been developed for *a general-purpose application environment for wireless mobile communication devices having limited* CPU speeds, memory battery life, *display size*, and a wide variety of input devices.”); Ex. 1014 at [0039] (“To compensate for *the limited display*, storage and network bandwidth capabilities of *mobile devices*, a log of the frequency of

download of applications may aid users in finding popular applications, and in ranking and narrowing user search results.”) (emphasis added).

139. Third, a POSITA considering Mehta would also have been motivated to look to Schlapfer because it explains recent developments in Java technology regarding digital content provisioning for mobile devices. Ex. 1009 at 3 (“With the possibility of downloading new applications over the network as known from Java Applets and the Internet, applications don’t need to be preinstalled on the device.”) *See also id.* at 11, 12. Mehta describes the use of Java throughout its specification. Ex. 1003 at Cls. 21, 42, 58, 72, [0015, 0064, 0080, 0092, 0095, 0097, 0098, 0105, 0106, 0113, 0130, 0133, 0145, 0148]. Mehta also refers to “J2ME” that is discussed in depth by Schlapfer. *See* Ex. 1003 at [0070]; Ex. 1009 at 5-14.

140. Additionally, it was well known to a POSITA that a provisioning model would include a corresponding set of provisioning attributes and descriptors. While Mehta does not specifically use the terms of provisioning attributes and/or descriptors, it discloses analogous features. For example, regarding “provisioning descriptors” as recited in claim 5, the specification of the ’790 patent states that “[t]he content descriptor specifies the *name* of the content to be provisioned, the *size* of the content, a location (*e.g., a URL*) at which the content is stored, and the content *type* of the content.” Ex. 1001 at 13:30-33 (emphasis added). Mehta discloses that “the content provider may include *a name and a short description* of

the application” (Ex. 1003 at [0098]); “[t]he recorded [provisioned application] data includes information pertaining to the incoming request 501 and the deployed application such as the subscriber ID, the *size* of the download . . .” (*id.* at [0076]); and “designating *a URL* [] identifies a file (an application or service) to download” (*id.* at [0064]) (emphasis added). Further, Mehta describes that “[i]n step 2704, the [Package Application] routine packages the application *using a determined file format by encapsulating the provisioned application with information* sufficient to enable the Handset Administration Console (See, for example, the Handset Administration Console of FIG. 2) executing on a wireless device to extract the application.” Ex. 1003 at [0148] (emphasis added). A POSITA would have understood at the time of the claimed invention that the information encapsulating the provisioned application in Mehta would correspond to the “provisioning descriptors” of claim 5.

141. With respect to the “provisioning attributes” of claim 5, the specification of the ’790 patent does not offer any specific teachings regarding a definition or explanation. A POSITA would have, however, understood “provisioning attributes” to include information related to provisioning. Mehta describes that “[*a*]s a provisioned application is being delivered to a user, the details about the transaction typically are recorded in the Logging Manager 508, which is accessible to the Billing Manager 507 to enable a variety of billing methods. *The*

recorded data includes information pertaining to the incoming request 501 and the deployed application such as the subscriber ID, the size of the download, the time and date of the download, the particular application downloaded, etc.” Ex. 1003 at [0076] (emphasis added). A POSITA would have understood that the information pertaining to the provisioned and deployed application, such as the subscriber ID, the size of the download, the time and date of the download, the particular application downloaded would correspond to the “provisioning attributes” recited in claim 5.

XI. CONCLUSION

142. Based on my review and above analysis of the prior art, it is my opinion that claims 1-4 and 8-11 of the '790 patent are anticipated by Mehta; and claims 1–14 of the '790 patent would have been obvious to a POSITA in light of Mehta and Schlapfer.

143. I declare under penalty of perjury that the foregoing is true and correct. I declare that all statements made herein of my knowledge are true, and 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.

Executed this 22nd day of February, 2023, in Escondido, California.



Anthony Wechselberger
