IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

WATCHY TECHNOLOGY PRIVATE LIMITED,	:	
Plaintiff,	:	Case No. _____
v.	:	**JURY TRIAL DEMANDED**
DEJERO INC. and DEJERO LABS INC.,	:	
Defendants.	:	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Watchy Technology Private Limited (hereinafter, "Watchy" or "Plaintiff"), by and through its undersigned counsel, hereby respectfully files this Complaint for Patent Infringement against Defendants, Dejero Inc. and Dejero Labs Inc. (hereinafter, collectively "Dejero" or "Defendants"), as follows:

PARTIES

1. Plaintiff Watchy Technology Private Limited is a private limited liability company incorporated under the laws of the Country of India.

2. Upon information and belief, Defendant Dejero Inc. is a corporation organized and existing under the laws of the State of Delaware, with a place of business at 61D Innsbruck Drive, Cheektowaga, Erie County, New York 14227, and can be served through its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, New Castle County, Delaware 19801, or wherever its registered agent and its authorized employees, officers, directors, and/or managers, may be found.

3. Upon information and belief, Defendant Dejero Labs Inc. is an Ontario business corporation organized and existing under the laws of the Province of Ontario, Country of Canada, with a place of business at 180 King Street South, Suite 140, Waterloo, Ontario N2L 3V3, Canada,

and can be served through its agents having apparent control via internationally agreed means of service reasonably calculated to give notice, including under the terms of the Hague Service Convention Treaty (T.I.A.S. No. 6638, 20 U.S.T. 361 (1965)); Inter-American Convention on Letters Rogatory (S. Treaty Doc. No. 27, 98th Cong., 2d Sess. (1984)); and Additional Protocol to the Inter-American Convention on Letters Rogatory (S. Treaty Doc. No.98-27, 58 Fed. Reg. 31,132 (1988)), or wherever its agent and its authorized employees, officers, directors, and/or managers, may be found.

4. This action is commenced against Defendant Dejero Inc. and Defendant Dejero Labs Inc. under 35 USC § 299(a) in a single action, including because, upon information and belief, Defendant Dejero Inc., which is based and operates within the United States, is an entity related to Defendant Dejero Labs Inc., and (1) any right to relief is asserted against Defendants jointly, severally, and/or, in the alternative, with respect to, and/or arising out of, the same transaction, occurrence, and/or series of transactions and/or occurrences relating to the making, using, selling, offering for sale, and/or importing in the United States of the same infringing instrumentalities; and (2) questions of fact common to each and all of Defendants will arise in this action.

NATURE OF THE ACTION

5. This is a civil action for patent infringement to stop Defendants' infringement of United States Patent No. 10,454,726 (the "'726 Patent" or "Patent-in-Suit"; attached hereto as Exhibit 1), which is presumed valid, including pursuant to 35 U.S.C. § 282.

6. Watchy alleges that Dejero has directly and indirectly infringed and/or continues to infringe the Patent-in-Suit by, *inter alia*, making, using, offering for sale, selling, importing, using (including in connection with internal uses and/or demonstrations), and/or inducing and/or contributing to such actions, including in connection with providing the infringing products and instructions/specifications for their use, including as detailed herein.

7. Dejero has had actual and/or constructive notice of the infringement alleged herein, including as detailed herein.

8. Watchy seeks damages and other relief for Dejero's infringement of the Patent-in-Suit, including as detailed herein.

JURISDICTION AND VENUE

9. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1, *et seq.*, including 35 U.S.C. §§ 271, 281, 283, 284, and 285. This Court has subject matter jurisdiction over this case for patent infringement, including under 28 U.S.C. §§ 1331 and 1338(a).

10. This Court has personal jurisdiction over Defendants, including because Defendants are Delaware corporations; Defendants have places of business in the State of Delaware; Defendants have minimum contacts within the State of Delaware; Defendants have purposefully availed themselves of the privileges of conducting business in the State of Delaware; Defendants regularly conduct business within the State of Delaware; and/or Plaintiff's cause of action arises directly from Defendants' business contacts and other activities in the State of Delaware, including at least by virtue of Defendants' infringing methods, systems, devices, apparatuses, products, and/or services, which have been, and are currently, at least practiced, made, used, offered for sale, sold, and/or imported in the State of Delaware. More specifically, Defendants directly and/or through intermediaries, at least make, use, offer for sale, advertise, sell, import, and/or distribute the accused products and/or services identified herein, comprising the claimed systems and/or systems that practice the claimed methods of the Patent-in-Suit in the State of Delaware. Defendants are subject to this Court's specific and general personal jurisdiction, including pursuant to Constitutional Due Process and the Delaware Long Arm Statute, including 10 Del. C. § 3104. One or more Defendants are subject to this Court's general personal jurisdiction due at least to their continuous and systematic business contacts in Delaware, including related to operations

conducted in Delaware and the infringements alleged herein. Further, on information and belief, Defendants are subject to this Court's specific personal jurisdiction, including because Defendants have committed patent infringement, and/or induced and/or contributed to the commission of patent infringement by others, in the State of Delaware, including as detailed herein. Further, on information and belief, Defendants regularly conduct and/or solicit business, engage in other persistent courses of conduct, and/or derive substantial revenue from goods and/or services provided to persons and/or entities in Delaware, including because Defendants solicit customers in the State of Delaware, Defendants have paying customers who are residents of the State of Delaware and who purchase and/or use Defendants' infringing products and/or services in the State of Delaware and throughout the U.S., Defendants have an interactive website and/or applications that are accessible from the State of Delaware and throughout the U.S., and/or Defendants have placed, and continue to place, their infringing products and/or services into the stream of commerce via an established distribution channel with the knowledge and/or understanding that such products are being, and will continue to be, used, offered for sale, sold, and/or purchased in this Judicial District and the State of Delaware.

11. Venue is proper in this District, including pursuant to 28 U.S.C. §§ 1391 and 1400(b), including because Defendants reside in the State of Delaware at least by virtue of the fact that they are incorporated in the State of Delaware and/or at least some of the direct infringement of the Patent-in-Suit occurs in this District.

WATCHY AND THE PATENT-IN-SUIT

12. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

13. Watchy is the assignee and owner of the Patent-in-Suit. Watchy builds internet aggregation systems that combine radio access technologies ("RATs"), such as 3G/4G,

connections to facilitate seamless and high-speed internet browsing and create a more stable internet connection.

14. Specifically, the inventions disclosed and claimed in the '726 Patent comprising, *inter alia*, increasing bandwidth available for user equipment to use for data communication, including by selectively enabling communication of data via the plurality of data channels made available by multiple RATs simultaneously, provide numerous benefits over any prior methods and/or systems. Including because of such benefits and innovations, Watchy has won numerous awards from various platforms and organizations, including NASSCOM, FICCI, Lockheed Martin (*e.g.*, the DST-Lockheed Martin India Innovation Growth Programme; the "IIGP"), and the Government of India, including the NASSCOM award for "Most Innovative and High Potential Technology of the Year" in 2015. These awards were, at least in part, based on the products and services provided by Watchy which embody and/or practice the systems and methods of the '726 Patent. Such products and services include the Bond007 product which began being marketed and sold in 2015 as mainly a pilot program serving as more of a rental model than a sales model and which was later renamed to ZifiLink in 2016, a product used by numerous companies, including some of the largest companies in India, *e.g.*, Network18 and UltraTech.

A. Overview Of The '726 Patent

15. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

16. The '726 Patent is entitled "System for Increasing Bandwidth Available for Data Communication." U.S. Patent Application No. 15/744,062, filed on January 12, 2018, and which issued on October 22, 2019 as U.S. Patent No. 10,454,726, claims priority to PCT Application No. PCT/IB2015/059909, filed on December 23, 2015, published on July 7, 2016 as PCT Publication No. WO2016/108150, which claims priority to Indian Patent Application No. 6673/CHHE/2014,

filed December 29, 2014 which issued on December 17, 2018 as Indian Patent No. 304,536.

1. Overview of the Prosecution of the '726 Patent

17. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

18. During the India portion of the prosecution of the '726 Patent, on December 29, 2014, the applicant filed Indian Patent Application No. 6673/CHHE/2014, which issued on December 17, 2018 as Indian Patent No. 304,536.

19. During the International portion of the prosecution of the '726 Patent, on December 23, 2015, the applicant filed PCT Application No. PCT/IB2015/059909.

20. On April 13, 2016, the patent examiners accepted then-pending claims 1-15 under Article 33(1) & 33(2) of the PCT as being novel; Article 33(3) of the PCT as comprising an inventive step; and Article 33(4) of the PCT as having industrial application.

21. During the U.S. portion of the prosecution of the '726 Patent, on January 10, 2019, the patent examiner issued a Non-Final Rejection, rejecting then-pending claims 1-15 under 35 U.S.C. § 103(a) as being obvious in view of U.S. Patent Publication No. 2011/0202641 to Kahn et al. ("*Kahn*") and U.S. Patent Publication No. 2003/0174733 to Kawai et al. ("*Kawai*").

22. On March 22, 2019, the applicant amended the claims and argued that the cited combination of *Kahn* and *Kawai* did not render the claims unpatentable.

23. With regard to the rejections under 35 U.S.C. § 103(a), the applicant noted in its response to the patent examiner's rejection that the applicant amended the claims based on the limitations the patent examiner noted were "absent in the references cited in the office action, as acknowledged by statements made under 'allowable subject matter.'"

24. On July 10, 2019, the patent examiner issued a notice of allowance.

2. Overview of the Unconventional '726 Patented Inventions and the Conventional Technology at the Time

25. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

26. At the time of the inventions of the '726 Patent reflected in the issued claims (the "patented inventions"), aggregation of multiple network communication technologies (*e.g.*, LAN, Wi-Fi, mobile network, etc.) was limited, if not non-existent. '726/1:24-28. At that time, despite many conventional devices comprising more than one network communication technology, they were configured and able to operate only on a singular network communication technology. '726/1:24-28. This was especially limited in the specific area of RATs, and, more specifically, multiple RATs (*e.g.*, Global System for Mobile Communications ("GSM"), Code Division Multiple Access ("CDMA"), Worldwide Interoperability for Microwave Access ("WiMAX"), Long-Term Evolution ("LTE", commonly marketed as 4G LTE), Wi-Fi, Bluetooth, and Time Division Synchronous Code Division Multiple Access ("TD-SCDMA"), among other wireless technology used to provide air interface to mobile devices for availing various data communication services). '726/1:24-28; 3:16-19; & 6:16-24.

27. More specifically, at the time of the '726 patented inventions, usage of the Internet on handheld communication devices, such as smart phones and tablets, was quickly on the rise. '726/1:14-15. Somewhat simultaneously, at that time, the content available over the Internet became more bandwidth-heavy, and users began accessing a wider variety of digital content via these devices. '726/1:15-17. Thus, if a user wished to access such high-bandwidth, rich content, such as video, audio, or other large files, they would need to have a device comprising, *inter alia*, high-bandwidth availability for a smooth, hassle-free experience. '726/1:17-19. Conventionally, some of these communication devices, such as smartphones, were provided with multiple RATs, each providing a data channel for communication, yet few, if any, permitted the use of more than

one, or the aggregation of, these multiple RATs. '726/1:24-29; *see also* the cited art in the '726 Patent.

28. Additionally, these conventional devices, as well as the RATs contained therein, suffered from limited bandwidth capabilities, among other limitations. '726/1:21-24. This meant that, at least conventionally, the user experience when accessing such rich content was far from satisfactory, smooth, reliable, or an enjoyable user experience. '726/1:19-21. Specifically, this unsatisfactory user experience was directly attributable to these bandwidth, and related, limitations of conventional devices, including the insufficient bandwidth made available by the data channels, and corresponding RATs, of the device. '726/1:21-29. Further, due to the increasing data size of content available, these limitations would become ever-increasingly limiting, resulting in exponential degradations in, *inter alia*, transfer speeds and increasing the likelihood of the user's hardware and/or software crashing or otherwise ceasing to transfer data. As noted, even where conventional devices comprised multiple RATs, and, thus, multiple data channels (such as in the case of dual SIM, dual active smart phones), each with its own available bandwidth, the conventional technology at the time simply did not permit the use of more than one instance of these technologies or channels at a particular time for communicating data. '726/1:24-29.

29. At the time of the '726 patented inventions, even where efforts were made to have non-handheld or non-wireless communication devices attempt operations over multiple RATs, these efforts were largely unable to produce the same user experience and reliability of otherwise conventional singular-technology communications. '726/1:14-19. The emerging technologies at the time comprised, *inter alia*, multi-path forwarding ("MPF"), multi-path TCP ("MPTCP"), and stream control transmission protocol ("SCTP"). '726/2:51-3:7. However, each of these technologies suffered from lack of adoption and implementation, and were not adequate solutions, including because they were based on modifications to the operation of data communication at the

transport level of the Internet protocol suite. In other words, these technologies related to the actual method of transporting data between two locations, meaning, *inter alia*, the devices at ***both*** locations must support the technology. As a result, had these technologies actually been implemented, conventional devices would not have worked. Further, most, if not all, device manufacturers did not seek to implement these untested technologies across their devices, nor did the entirety of Internet devices and users similarly wish to be required to purchase entirely new devices on both ends. This, in turn, would, *inter alia*, necessarily increase the cost and complexity of servers and similar computing devices, reducing user experience.

30. Notably, even under these newer, unconventional and unimplemented, technologies, the devices did not have any means of selectively enabling and/or disabling any given RAT, and, thus, were subject to an all-or-nothing usage. In other words, either the protocol required use of all available RATs, or the protocol was not used. Moreover, the use of multiple data channels simultaneously to communicate data additionally comes with its share of technical problems, among other challenges, such as, for example, when multiple data channels are used, there is an increased chance of data packet losses. This increase in data packet loss would, in turn, require the resending of data packets by each device, potentially multiple times, which would directly result in a negative impact on the quality of data communication, and, thus, reliability of data communication. Also, there can be preferences with respect to using one data channel over the other, for several reasons, one of which may be the superior bandwidth made available by one channel over the other.

31. More specifically, as part of these newer technologies, when there are two or more possible paths through which any particular piece of data may be sent, then a decision must necessarily be made as to which of these paths to use. As a result, a condition that often occurs when using these technologies is a condition referred to as “asymmetric routing,” whereby traffic

sent to a given IP address arrives on one of multiple interfaces, but traffic originating from that address leaves by a different one of the multiple interfaces. Including as noted, there are a number of problems associated with this, including, *inter alia*, issues with packets being blocked for having spoofed addresses; packets being blocked due to firewall or other network security systems; and/or unnecessary congestion over a single of the multiple interfaces.

32. For example, when using these technologies, any packets sent through the interface they did not originate from will appear to have a spoofed source address, and may, by common practice, be blocked as a matter of policy on the network, resulting in an unintentional degradation of the quality and reliability of data communication on the network. Further, network devices which depend on connection tracking, such as stateful firewalls and intrusion detection systems, must observe both inbound and outbound traffic to be effective. Thus, the use of devices to simultaneously transfer data to servers without proper configuration of the server-network architecture may result in unintentional and erroneous blocking of data or blocking of network addresses. Further, if attempting to avoid these issues by routing the majority of the traffic of high-bandwidth data through a single interface, this may cause unnecessary congestion on that data channel, rather than spreading the traffic over multiple interfaces on an as-needed basis. Similarly, if data was received successfully by a destination router or server through multiple interfaces of the user device, the destination router or server may still elect to send all return traffic back to the user through a single interface. If the intention was to provide a redundant path by which the server can be reached, then routing all return traffic through a single interface will only provide for a redundant path to the outbound traffic only – *i.e.*, only outbound traffic is spread across interfaces, while return traffic is communicated over only a single interface, which would be of little to no use in increasing bandwidth for the particular case of requesting and receiving large files or data streams.

33. Thus, in any of these instances, there is a resulting loss of packets with these technologies, including because, whether blocked or not, only some of the intended packets are able to reach their intended destinations, with each additional RAT available and used increasing the chance of these issues and resulting losses. Further, because the packets need to be collected and assembled at the destination, when packets are lost, the sending device is required to start from scratch and resend the entirety of the data and hope that all of the packets are successfully transferred.

34. As a result, at the time of the '726 patented inventions, the most common, conventional, and practical way to enable data communications between devices over a single RAT, and each data channel therein, including in view of the above-noted limitations, was simply to either reduce the amount of content communicated, for example, by limiting what is shown on a single page, limiting the data size of content communicated, such as reducing video content to very low resolutions, very short length clips, and very low frame rates, and/or otherwise reducing the data requirements of the video so that the bandwidth limitations could be met. Further, at the time of the '726 patented inventions, the most common, conventional, and practical way to enable data communications between devices over more than one RAT, and each data channel therein, including in view of the above-noted limitations, were the efforts towards creation of new standards that introduced additional technical issues by, for example, requiring all devices involved to support these emerging, different standards and/or requiring data communication operate on all of the available RATs, and each data channel therein, regardless of whether it was otherwise technically required, thus, *inter alia*, increasing costs and complexity while decreasing user experience.

35. Therefore, at best, conventional systems were built to either use one data channel at any instance, or use multiple data channels simultaneously, in an all-or-nothing manner, and therefore attract those further issues, including further technical issues, discussed herein. '726/1:24-29. The

claimed inventions of the '726 Patent improve the functionality, efficiency, and reliability of network access technology and data communication systems and methods as described herein, including by permitting the selective enabling and/or use of multiple RATs, and the data channels therein, for data communication, including over the Internet, including via the use of an intermediate server operating over the application layer, thus, *inter alia*, reducing the complexity and cost of computing systems while retaining a consistent, reliable user experience, including by utilizing the intermediate server for assembling and disassembling data streams using the device's existing RATs and network, including Internet, protocols, including as described in the '726 Patent. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58 6:5-15; 6:25-41; & 6:52-7:36. More particularly, none of the conventional technologies enabled intelligent selective enabling of communication of data via the plurality of data channels made available by multiple RATs available to the communication device over the application layer using an intermediate server. '726/1:24-29.

36. The "SUMMARY" section of the '726 Patent states, in part, as follows:

> An embodiment provides a system for increasing bandwidth available for data communication. The system includes a user equipment and an intermediate server. The user equipment is configured to allocate data to a plurality of data channels for transmission to the intermediate server, wherein each of the data channels is associated with a radio access technology; send the allocated data via the plurality of data channels simultaneously to the intermediate server, which will send the data to the destination server; receive data from the destination server via the intermediate server via the plurality of data channels simultaneously; and assemble data received from the intermediate server via the plurality of data channels.
>
> Another embodiment provides a method for increasing bandwidth available for data communication. The method includes allocating data to a plurality of data channels for transmission to an intermediate server, wherein each of the data channels is associated with a radio access technology; sending the allocated data via the plurality of data channels simultaneously to the intermediate server, which will send the data to a destination server; receiving data from destination server via the intermediate server via the plurality of data channels simultaneously; and assembling data received from the intermediate server via the plurality of data channels.

’726/1:36-60.

37. The ’726 patented inventions have advantages over conventional systems and methods, including that they enabled intelligent selective enabling of communication of data via the plurality of data channels made available by multiple RATs available to the communication device, including via the use of a multiplexing-agnostic intermediate server operating on the network application layer. ’726/Abstract; 1:36-60; 2:15-28; 2:51-3:7; 3:44-67; 4:18-6:15; 6:25-7:36.

38. In some embodiments, this includes the use of an intermediate server as part of the system, including so that only the system devices must support the new, unconventional multi-data channel technologies, meaning a user may continue to access all of the same web content without needing to research whether a chosen content provider also supports these technologies. ’726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58 6:5-15; 6:25-41; & 6:52-7:36. To the contrary, conventional systems were operated under the prior singular-connectivity model wherein only a single connection was maintained between the content provider’s server and the user’s device. However, included as noted herein, these systems failed to provide sufficient bandwidth and other resources for the user to browse web content, nor did they permit the use of more than one RAT simultaneously, regardless of how many a user’s device comprised. An updated infrastructure and architecture was needed, and the ’726 patented inventions provide such systems and methods which solve these problems. ’726/1:14-60; & 2:14-28.

39. In some embodiments, this includes the selective enabling, disabling, and/or use of one or more available RATs, including associated data channels, including so that only the number of data channels necessary to meet the needs or demands of the user’s network usage were made available, including to minimize the required resources occupied by the user’s device when communicating data. ’726/Abstract; 2:14-28; & 6:5-7:36. To the contrary, including as noted herein, conventional systems were operated on an all-or-nothing model, meaning that either the

device supported multi-channel connectivity, and, thus, operated all of the available data channels all the time, or the device did not support multi-channel connectivity and only ever used a single available data channel, regardless of amount available. '726/1:14-28. However, as a result, these conventional systems suffered from the issues related to multi-channel connectivity systems noted herein, as well as increased resource usage by constantly operating all of the available data channels at all times, resulting in, *inter alia*, reduced battery life, increased heat, larger device sizes, and similar issues. '726/1:14-28; & 7:17-22. An updated infrastructure and architecture was needed, and the '726 patented inventions provide such systems and methods which solve these problems. '726/1:29-60; & 2:14-28; *see also, e.g.*, 2:51-7:36.

40. Including as of the priority date of the Patent-in-Suit, there have been various, albeit vastly inferior, means outside of the claimed inventions for achieving the ends of enabling communication of high-bandwidth content over a network, including on the Internet, via one or more RAT, and associated data channels. Including as noted herein, at the time of '726 patented inventions, conventional approaches to enabling data communications over multiple data channels to communicate data in a scalable, selectable, and reliable way using conventional technology were limited. '726/1:29-60; & 2:14-28. Conventional approaches sought to solve the ongoing problem of limited resources, including limited bandwidth in any single RAT and other limited resources of user devices, including hardware and/or software, which limited a user's ability to reliably communicate data to and from content providers and/or other data servers, including high-bandwidth content, such as multimedia content at longer lengths, higher frame rates, and/or higher resolutions. Including as noted herein, these approaches included at least the use of MPF, MPTCP, and SCTP to connect a user device and content and/or other data server for data communications using multiple data channels within multiple RATs. Including as noted herein, while each of these approaches addresses some part of the noted limitations, they each additionally introduce further

limitations and issues, including increased resource usage of the user device, increased risk for packet loss or other network degradation, and/or simply inability to connect to servers without these new, unconventional, multi-channel technologies and/or protocols, including as noted herein.

41. With the use of the MPF technology, the data packets being transmitted between the devices are broken up at the source device to be passed through a series of available next hops to reach an egress node (the node where the data leaves this system reassembled). An additional data structure is used to track the egress node and desired ratios for next hops. With the use of the MPTCP technology, the connected devices operate on an advancement of conventional TCP technology by multiplexing TCP traffic over multiple network interfaces simultaneously, in an all-or-nothing fashion. MPTCP creates risks for secure applications, including because MPTCP is a transport layer technology which relates to the actual transporting of data along the network, thus interfering with existing secure transmission protocols, rendering them incompatible and effectively unusable with these newer protocols. As a result, any transfer or data communication over the MPTCP protocol would have required all devices involved to support MPTCP. With the use of the SCTP technology, the devices communicate via a SCTP user application ("SCTP user") and a connectionless packet network service, such as IP, wherein the SCTP protocol is viewed as a layer between this application and network service. SCTP permits multiple streams (*e.g.*, connections over IP) to be used simultaneously, but, again, only in an all-or-nothing fashion. Notably, while these technologies were in their infancy and being developed, they were far from widely adopted and could hardly be considered conventional technologies, including due to the limitations noted herein precluding such widespread adoption at the time. Indeed, including as noted herein, even today, these technologies are rarely used, especially in user devices.

42. Thus, in each of these approaches, the content provider and/or data server operator would be subjected to a considerable cost in order to implement these newer, unconventional technologies

where, at the time of the '726 patented inventions, these technologies were in their infancy and far from any sufficient usage to be considered conventional. Indeed, even as of today, the vast majority of devices in use simply do not support these technologies. These approaches also required the user to obtain a device that supports these technologies, and then, each time they wished to connect to a server, research whether that server actually supported any of these technologies. Thus, at a minimum, even where a user's device supported the technologies, they may never use them, including because no server they accessed would have supported them. Moreover, even if the user were to be fortunate and find a server with which they wish to communicate properly supported any of these technologies, the user's device, if actively using the technology, would be subject to the issues noted herein, including increased usage of the device's resources, including because these technologies operate in an all-or-nothing fashion. In other words, the user's device would suffer from, *inter alia*, reduced battery and/or additional heat production from having to power all of the available RATs and/or lower quality, less reliable connectivity due to the increase in packet loss due to the increased potential for same. '726/1:14-28; & 7:17-22.

43. Additionally, these newer, unconventional technologies further ignored the vast differences between potentially available RATs, including the fact that some may be associated with higher costs of usage. For example, while a user device may comprise both LTE and Wi-Fi RATs, at the time of the '726 patented inventions, the costs for mobile data (*e.g.*, LTE) bandwidth were vastly higher than the costs for Wi-Fi bandwidth. Thus, for a device to enable both at all times may unnecessarily increase the usage of the user's mobile data where the bandwidth available to the Wi-Fi data channel of the user device would otherwise be sufficient. '726/Abstract; 2:14-28; & 6:5-7:36. Rather, as part of the '726 patented inventions, the available RATs are selectively enabled so that only those specifically required to meet the bandwidth, and other resource, demands of the device, and the data communication therewith. '726/Abstract; 2:14-28;

& 6:5-7:36.

44. An interconnected system comprising a specifically implemented intermediate server and user device connectivity, including by selectively enabling available RATs for communications between the intermediate server and user device, including the inventions of the '726 Patent, avoids, minimizes, and/or addresses these issues by providing a means for limiting the use of RATs to only those periods determined to be necessary by the user. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; & 6:5-7:36. More specifically, by implementing the intermediate server, the system is granted more control of the scheduling and transmission of data between the user device, the intermediate server, and the ultimate server with which the user seeks to communicate and does not require that the destination address supports any specific technologies, such as MPTCP. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36. Moreover, the '726 patented inventions further do not require any modification to the existing network beyond the implementation of the intermediate server (as part of the system) between the user device and content or data server, including because the use of these newer, unconventional technologies occurs only between the intermediate server and user device, including that, once the intermediate server receives the data to be transported, reassembles the data and then transmits it to the ultimate destination via the expected, conventional networking protocol. '726/Abstract; 1:36-60; 2:14-28; 2:51-6:15; 6:25-41; & 6:52-7:36.

45. The use of the intermediate server further avoids, minimizes, and/or addresses the issues noted herein, including the increased risk of packet loss, including by reducing the distance traveled by the data, including because the user device and intermediate server are kept within a much closer distance than the user device and ultimate destination would otherwise be maintained. As a result, even where packets are lost and must be resent, the time between each is much lower and much easier to manage. Similarly, the use of selectively enabling the RATs avoids, minimizes,

and/or addresses this issue by limiting the use of multiple data channels to only certain instances the user has deemed necessary, including, *inter alia*, when the bandwidth required exceeds the amount of a single RAT, the application transmitting data calls for the use of multiple RATs, and/or the type of content being transmitted is better suited for a specific combination of RATs. '726/Abstract; 2:14-28; & 6:5-7:36.

46. The use of selectively enabling the RATs of the user device further avoids, minimizes, and/or addresses the issues with the conventional technology by limiting the use of more costly and/or resource-intensive RATs. '726/Abstract; 2:14-28; & 6:5-7:36. With the '726 patented inventions, the RAT with the most reliable and/or highest bandwidth will be used in most scenarios, while the selective enabling criteria permits the use of less reliable, lower bandwidth RATs only when needed. This, in turn, may reduce the cost to the user by reducing the use of more costly RATs, *e.g.*, LTE or other mobile data, to only when necessary, including as determined by the user.

47. Prior art methods for data communication via selectively enabling RATs on a user device, including to communicate with an ultimate destination via an intermediate server, were likewise inferior. Including as noted herein, back at the time of claimed inventions, data communication over networks, including the Internet, were almost entirely via a pure server-client architecture with user device communicating with the destination server over either a single RAT or all of the device's available RATs at the same time, including as exemplified by the *Kahn* and *Kawaii* patents and ancillary prior art addressed extensively during prosecution of the '726 Patent. As noted by the inventors during prosecution, the systems and methods of *Kahn* and *Kawaii* did not permit for the selective enabling of RATs of the user device to communicate with the intermediate server, which, in turn, facilitates the data communication between the ultimate destination server and the user device via conventional network protocols between the intermediate and destination

servers. Including as noted herein, the claimed inventions improve and build on this, including because, including as noted by the inventor during prosecution, the claimed invention comprises an architecture and system that provides advantages over these prior art systems, including by permitting user devices to be connected to an intermediate server via one or more of the user device's RATs, which are selectively enabled based on specified criteria, to provide better and/or more available resources and/or reliability to the user device. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. According to the inventor, this architecture results in, *inter alia*, a vastly improved functionality, efficiency, and reliability of content distribution, data communication, and networking.

48. Among other things, the inventors of the Patent-in-Suit wanted to provide systems and methods for data communication via selectively enabling RATs on a user device, including to communicate with an ultimate destination via an intermediate server increasing available bandwidth for communication devices for data communications over a network, such as the Internet, in a reliable, seamless, and comprehensive way such that the user could simply operate the unconventional arrangement of devices of the patented inventions on existing networks, including by providing an intermediate server handling data communications on the application layer and relaying the data over existing network architecture, thereby, *inter alia*, reducing, or eliminating, issues related to limitations on bandwidth and other resources, including those noted herein. As noted in the specification, the user experience for communication devices with singular RATs "[was] far from satisfactory…attribute[able] to the insufficient bandwidth made available by the data channel made available to the[] device." '726/1:19-24. As further noted in the specification, while some communication devices do comprise multiple RATs and "multiple data channels…only one data channel can be used at an instance for communicating data." '726/1:24-28. Thus, according to the specification, "there is a need for a system that improves the bandwidth

available to a user device…[and] that can selectively improve bandwidth made available to a user device." '726/1:29-32. However, including as noted herein, existing technology offered only unacceptably inferior solutions of enabling selective improvement of bandwidth for data communication over multiple RATs.

49. In one embodiment, the '726 patented inventions comprise user equipment 102 (*e.g.*, a hand-held telephone, a mobile phone, a smart phone, a tablet, a phablet, etc.), including, for example, a dual SIM dual active mode smart phone, comprising multiple RATs 108 (*e.g.*, RAT 108a, 108b, 108c, etc.), and intermediate server 104, for example, such as the exemplary system shown in Figure 1 of the '726 Patent:

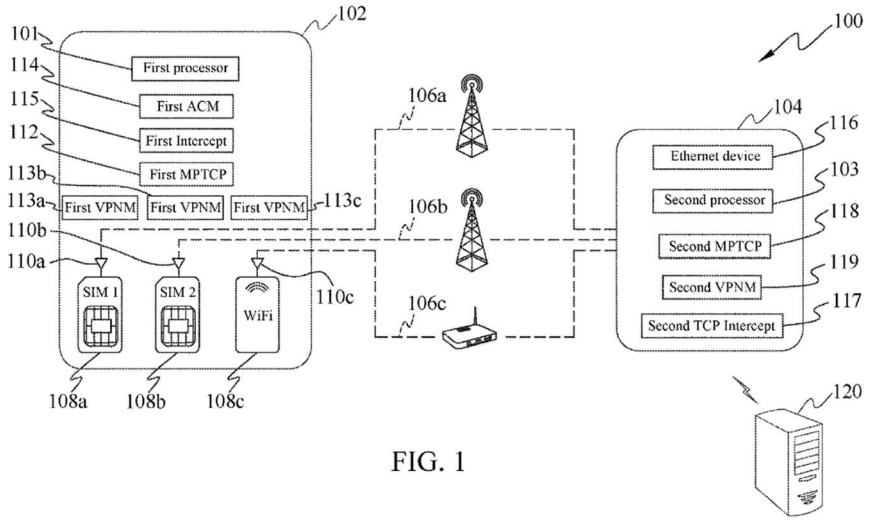


FIG. 1

'726/Fig. 1; 2:14-17; 2:53-60; 3:15-17; & 6:5-15. Each RAT 108 of user equipment 102 is associated with a respective transceiver 110 (*e.g.*, transceiver 110a, 1108, 110c, etc.) of user equipment 102 that is capable of providing a data channel 106 therefor (*e.g.*, data channel 106a, 106b, 106c, etc.) which enable user equipment 102 to communicate with other devices via RATs 108. '726/2:60-67; & 6:5-15.

50. Additionally, user equipment 102 comprises MPTCP 112, Aggregation Control Module ("ACM") 114, first TCP intercept 115, and a plurality of Virtual Private Network Modules ("VPNMs") 113 (*e.g.*, VPNMs 113a, 113b, 113c, etc.) each associated with a respective RAT 108.

'726/2:67-3:7. Similarly, intermediate server 104 comprises ethernet device 116, second TCP intercept 117, second MPTCP 118, and second VPNM 119, each of which is configured to communicate with at least user equipment 102 and destination server 120. '726/3:8-15.

51. In one exemplary embodiment, user equipment 102 comprises a dual SIM, dual active smart phone comprising RATs 108 as EDGE, LTE, and local area wireless technology (*e.g.*, WiFi), or similar wireless technology described herein and which may use all of the RATs 108 simultaneously when communicating data to destination server 120 via intermediate server 104. '726/3:15-22; & 6:5-24. Specifically, as an example, when user equipment 102 seeks to communicate with destination server 120, user equipment 102 transmits a request to intermediate server 104, including by ACM 114 of user equipment 102 operating to permit first MPTCP 112 of user equipment 102 to send the request, via a corresponding RAT 108 of user equipment 102, to second MPTCP 118 of intermediate server 104, including information for use in, and to facilitate, transferring the requested data to user equipment 102. '726/3:23-36. This information may further comprise, without limitation, information corresponding to the data to be downloaded (*e.g.*, data size, data type, and address) and/or information corresponding to available RATs 108 (*e.g.*, address information, bandwidth, information, network strength information, and service provider information). '726/3:33-43.

52. Once user equipment 102, including via MPTCP 112, requests data communications, as noted above, intermediate server 104 begins communicating with destination server 120 via ethernet device 116 of intermediate server 104, downloading the requested data via second TCP intercept 117, which transfers the downloaded data to MPTCP 118 for segmentation into data blocks to then be transmitted via data channels 106 of RATs 108 and onto MPTCP 112 to reassemble the data for use by user equipment 102, and any applications thereon. '726/3:44-67. Additionally, when the data is transmitted between over data channels 106, second VPNMs 119

may encapsulate and/or encrypt the data at intermediate server 108 and, upon receipt at user equipment 102, first VPNMs 113 removes any such encapsulation and/or encryption and forwards the data to first MPTCP 112. '726/3:56-64. Likewise, the uploading of data from user equipment 102 to destination server 120 occurs via a similar process in reverse via intermediate server 104. *See* '726/4:1-39. As a result, the device is reliably able to operate using multiple RATs to download the data, thus increasing the available bandwidth to the device without needing to increase the bandwidth of any individual RAT. '726/Abstract; 2:14-28; & 6:5-7:36.

53. In another embodiment, the '726 patented inventions comprise system 100 described above further comprising one or more additional devices, one or more external user equipment 202, comprising, similarly to user equipment 102, a plurality of RATs 208 (*e.g.*, RATs 208a, 208b, 208c, etc.) associated with respective transceivers 210 (*e.g.*, transceivers 210a, 210b, 210c, etc.) providing data channels 206 (*e.g.*, data channels 206a, 206b, 206c, etc.), MPTCP 212, a plurality of VPNMs 213 (*e.g.*, VPNM 213a, 213b, 213c, etc.), ACM 214, and TCP intercept 215, including as shown in Figure 2 of the '726 Patent:

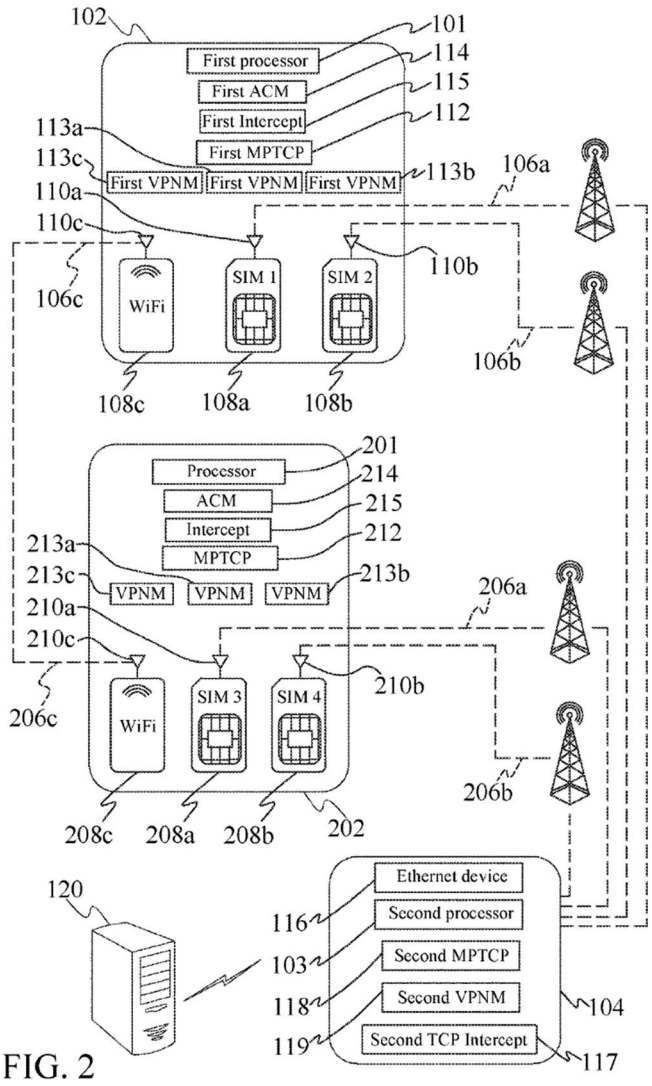


FIG. 2

'726/Fig. 2; & 4:40-61. User equipment 102 may connect to external user equipment 202 over one of the RATs 108, such as Wi-Fi RAT 108c, of user equipment 102 and corresponding Wi-Fi RAT 208c of external user equipment 202, leaving the remaining open and available for communication with intermediate server 104. '726/4:62-5:2. As with the above-described embodiment, the communication between user equipment 102, user equipment 202, and intermediate server 104 operate using ACMs 114 and 214 and TCP intercepts 115, 117, and 215, such that both user equipment 102 and external user equipment 202 connect to intermediate server 104 as part of the data communication with destination server 120, including where the load is split between both user equipment 102 and user equipment 202. '726/5:2-6:4.

54. Operating on the application layer, in some embodiments, first ACM 114 selectively enables simultaneous usage of multiple data channels 106 to enable communication with the destination server 120 via intermediate server 104. '726/6:25-30. Including as shown in Figure 3 of the '726 Patent, first ACM 114 monitors data usage 302 of user equipment 102 in real time, and, based on a configurable, or pre-configured, data usage value, causes first MPTCP 112 to activate, thus enabling usage of multiple data channels 106 if data usage 302 exceeds this value, and deactivate if data usage 302 returns below this value:

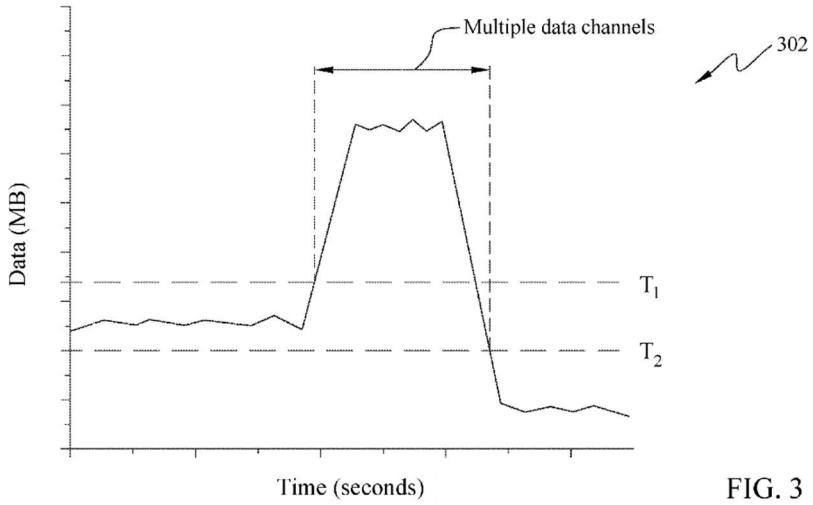


FIG. 3

'726/Fig. 3; & 6:30-41. These data usage value limits may be the same or different, or a function of data and time (*e.g.*, if data usage exceeds 10mbps for at least 6 seconds). '726/6:42-51. Additionally, the activation and/or deactivation of MPTCP 112 by first ACM 114 may occur based on requests to communicate from applications on user equipment 102 or based on the type of data to be communicated, where the data type may be such that higher amounts of bandwidth are required for a reliable, smooth, and consistent user experience, such as, for example, a large video file. '726/6:52-7:12; & 7:23-36.

55. The claimed inventions of the '726 Patent have advantages over conventional systems and methods, including, *inter alia*, that they allow a user to more reliably request, view, and transmit data to and/or from the data server via the use of the intermediate server and selective

enabling of RATs on the user device. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. Advantageously, by providing intermediate server 104 as the intermediary between user equipment 102 and destination server 120, intermediate server 104 acts as a carrier of the data from users, including via user equipment 102, to the data server, including destination server 120, and vice versa. '726/Abstract; 1:14-28; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-7:36. This, in turn, requires the unconventional use of specialized intermediate server 104 which, *inter alia*, communicates with user equipment 102, including via one or more selectively enabled RATs 108 of user equipment 102, to receive the data to be transmitted. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36. This selective enabling occurs based upon criteria determined by the user such that, if one or more of said criteria is met, *e.g.*, increased bandwidth is needed to achieve a consistent, reliable user experience, one or more additional of the RATs 108 of user equipment 102 is enabled. '726/Abstract; 2:14-28; & 6:5-7:36. These multiple RATs 108 are, in turn, used to connect user equipment 102 and intermediate server 104, including via data channels 106 corresponding to respective RATs 108, such that any data between user equipment 102 and intermediate server 104 operates on the presently enabled data channels 106. '726/Abstract; 1:14-28; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-7:36. Intermediate server 104 then receives and assembles the data sent from user equipment 102 and then transmits this data to destination server 120 via conventional network technologies and/or protocols. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36. Further, any data sent back from destination server 120 destined for user equipment 102 likewise passes from destination server 120 to intermediate server 104 via conventional network technologies and/or protocols and on to user equipment 102 via the enabled data channels 106 of corresponding, selectively enabled RATs 108. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36.

56. Furthermore, where the network connection between a user equipment 102 and

destination server 120 would otherwise be potentially somewhat unreliable and subject to lower bandwidth say over a wireless network, the use of intermediate server 104 proximately located to user equipment 102 results in a more reliable connection and represents an architectural improvement over conventional pure server-client systems. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36. In this way, the bandwidth-heavy communications overhead of transmitting high-bandwidth content is performed on a far more reliable network using the enabled data channels 106 of corresponding RATs 108, resulting in much less likelihood a user would get logged off prior to the completed transfer, increased packet loss, or the connection failing, and, furthermore, a diminished amount of traffic occurs on the network between destination server 120. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36. Thus, the patented tiered-based server system with selective enabling of available RATs results in a smoother, more reliable, and better user experience.

57. Including as noted above, the specification of the '726 Patent teaches specifically how the technological improvements of the network content distribution and data communication systems and methods of the '726 Patent are achieved. Among other innovations, the inventions are able to provide to means for the user's device (for example, user equipment 102) to more reliably communicate with a data server (for example, destination server 120) and scale the bandwidth available to the user (and, thus, the user's device) for data transfer; determine how many, and which, RATs (for example, RATs 108) are available for use, and/or used, in data communications with an intermediate server (for example, intermediate server 104), based on specified criteria (*e.g.*, bandwidth requirements, application request, content or data being transmitted, etc.); and use of the intermediate server (for example, intermediate server 104) to facilitate communications with the data server (for example, destination server 120) over existing networking technologies and/or protocols (*e.g.*, TCP, IP, ethernet, etc.). '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. Thus, the

invention details how the disclosed, claimed improved network content distribution systems and methods can be realized and how their functionality can be accomplished. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. The claims of the '726 Patent recite how to implement these improved network content distribution systems and methods. *See, e.g.*, '726/Claims 1-10. Furthermore, the claims require a non-conventional and non-generic method in order to allow for the system to selectively enable the RATs to facilitate communication between the user device and intermediate server and for facilitating the assembling and/or disassembling of data on the intermediate server when sending and/or receiving data to and/or from the ultimate destination. Thus, the claimed inventions of the '726 Patent describe an application specific order of steps for use in a system that is not a generic or conventional arrangement. *See, e.g.*, '726/Claims 1-10.

58. These claimed limitations disclose a particular architecture and way in which the communication of specified high-bandwidth data over the Internet can be accomplished from a user device to destination server via the use of an intermediary server which interprets, disassembles, and reassembles data sent to and from the user device via the use of one or more RATs of the user device being selectively enabled and communicating with the intermediate server, rather than requiring the user device to directly connect to the destination server and be subject to any limitations therewith, including the specific way the negotiation and communication between the user device, intermediate servers, and destination servers is accomplished, including to provide an intermediary-based network and data communication system providing a more reliable and scalable system and providing a better user experience, including by permitting selective enabling of additional RATs – as opposed to using conventional systems and methods to communicate data, such as those described in the '726 Patent and herein. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. An example of such architecture and functionality is as shown in Figure 1 of the '726 Patent:

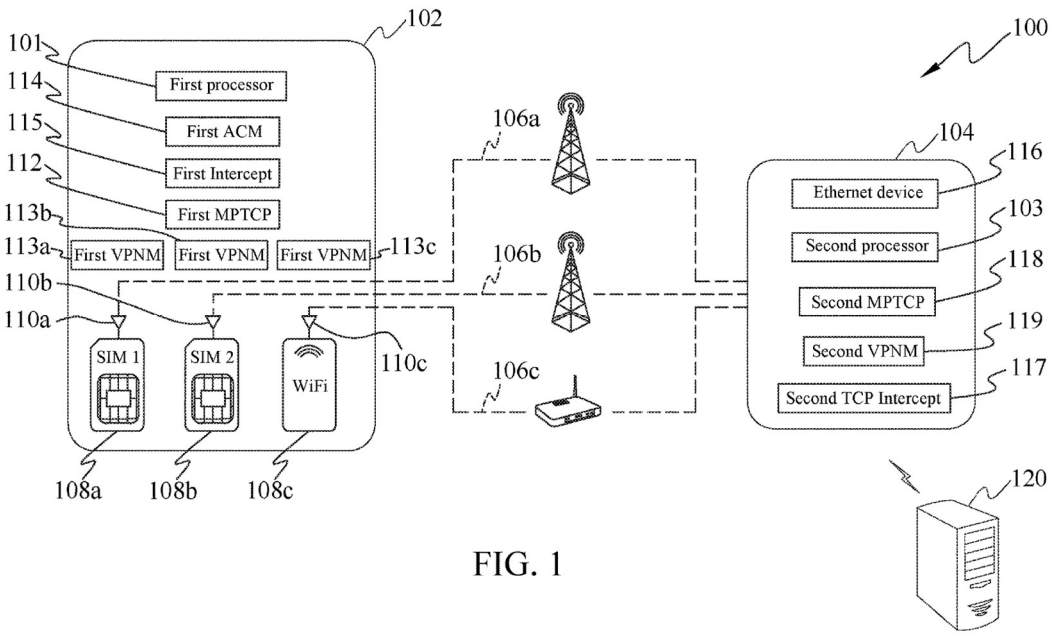


FIG. 1

'726/Fig. 1; *see also* '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36.

59. On the other hand, including as noted herein, the convention at the time of the '726 patented inventions was to use only a single RAT of the user device, or, at best, implement one of the three unconventional, limited approaches noted above, each of which simply resulted in additional issues being created. This was due to, at least in part, for example, conventional data servers, and user devices, lacking the newer, unconventional technologies due to the required investment of additional resources in systems in order to support them, including that, even today, such systems are rare, and certainly not commonplace amongst user devices. Additionally, conventional content providers sought to avoid the limitations of individual RATs and added limitations of the use of multiple RATs, by simply not using more than one at a time, or using an all-or-none. Including as noted, this resulted in users having unreliable access to content, often resulted in the systems of the content providers crashing or otherwise becoming inoperable, and left user devices with shorter battery lives, larger sizes, and/or increased heat in order to compensate for the use of all of the available RATs.

B. The Claims Of The '726 Patent Are Directed To Patentable Subject Matter

60. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

61. Including as set forth herein, the claims of the '726 Patent are directed to patentable subject matter. The claims of the Patent-in-Suit, including the asserted claims, when viewed as a whole, including as an ordered combination, are not merely the recitation of well-understood, routine, or conventional technologies or components. The claimed inventions were not well-known, routine, or conventional at the time of the invention, over five years ago, and represent specific improvements over the prior art and prior existing systems and methods.

1. The '726 Patent is not Directed to an Abstract Idea

62. The claims of the '726 Patent neither describe nor claim a concept nor a generic method or computerized system. Instead, the '726 claims address, among other things, a persistent problem with systems for communicating data by selectively enabling RATs to improve bandwidth at the time of the invention whereby selectively enabling RATs to improve bandwidth available to a user device with multiple RATs over the application layer via an intermediate server in satisfactory, smooth, and/or reliable manner was unavailable (for example, devices simply did not support use of multiple RATs); impossible (for example, devices supporting multiple RATs permitted only an all-or-none operation, rather than selective enablement); impractical (for example, increasing bandwidth would require every potential destination server to modify their hardware and/or software, thus limiting the potential destination servers to which the user could connect); and/or cumbersome for example, users would have to investigate whether a potential destination server supported multiple RAT connections). The '726 patented inventions enable a substantial improvement in network and data communication systems, including their functionality and utility.

63. Particularly, the '726 patented inventions enable intelligently deciding when such an

increase in bandwidth is required, and, when required, selectively enabling communication of data via the plurality of data channels made available by multiple RATs of a user equipment, simultaneously. The selective enabling occurs when some specified criteria are met, including, *inter alia*, where the data usage by the user equipment crosses a first threshold, data communication with an external device is requested by one or more enlisted applications, and/or based on type of content being communicated by the user equipment. Moreover, including as noted herein, such selective enabling is performed via the application layer rather than the transport layer of other technologies at the time.

64. Prior to the '726 patented inventions, high bandwidth data communications were typically not performed using RATs due to the limited resources available. As a result, often content that was delivered to mobile user devices, or otherwise over RATs, was typically of lower quality in order to reduce data size and, thus, reduce usage of limited bandwidth and other resources. Further, some RATs operated on a system that was much more costly than others, and, thus, the use of these RATs would result in the user paying more for the use of bandwidth that could have been otherwise allocated to another available RAT, or could have been avoided because only a single RAT would have sufficed.

65. Prior to the '726 patented inventions, conventional systems which implemented any form of multi-channel technology would have required both the user device and each and every potential destination data server to support these technologies, yet this simply was not done, including because it would require substantial resources on the server side of the data server in order to operate. Thus, attempts to meet resource requirements meant that either the conventional method of simply using a single RAT with a large bandwidth was used, or, if multi-channel technology was used, all of the available RATs were used, decreasing reliability and increasing resource usage of the user device. The specific claimed inventions of the '726 Patent disclose unconventional

systems and methods which solve these limitations, including, without limitation, by selectively enabling RATs to improve bandwidth available to a user device with multiple RATs, and corresponding data channels, of the user equipment based on specified, claimed criteria, such as if data usage by the user equipment crosses a first threshold to improve available bandwidth for data communication between the user equipment and content servers, including via the intermediate server operating on the application layer for communications between the user equipment and intermediate server.

66. These claimed limitations disclose a particular architecture and way in which the communication of specified high-bandwidth data over the Internet can be accomplished from a user device to destination server via the use of an intermediary server which interprets, disassembles, and reassembles data sent to and from the user device via the use of one or more RATs of the user device being selectively enabled and communicating with the intermediate server, rather than requiring the user device to directly connect to the destination server and be subject to any limitations therewith, including the specific way the negotiation and communication between the user device, intermediate servers, and destination servers is accomplished, including to provide an intermediary-based network and data communication system providing a more reliable and scalable system and providing a better user experience, including by permitting selective enabling of additional RATs – as opposed to using conventional systems and methods to communicate data, such as those described in the ’726 Patent and herein. ’726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. An example of such architecture and functionality is as shown in Figure 1 of the ’726 Patent:

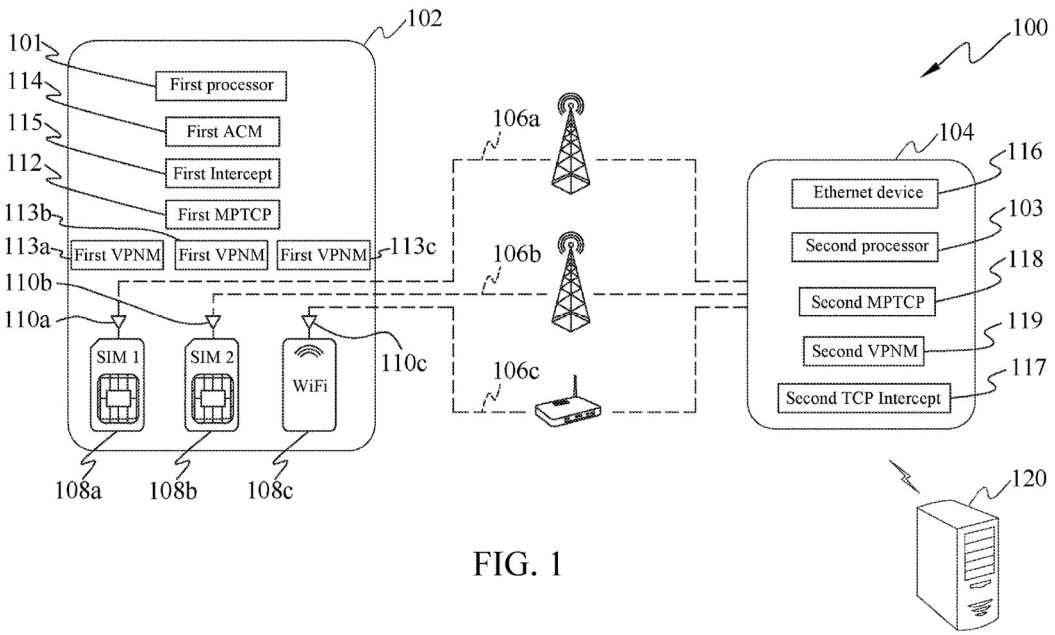


FIG. 1

'726/Fig. 1; *see also* '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36.

67. More specifically, the claimed inventions of the '726 Patent provide particular methods and systems for the selective enabling of RATs to improve available bandwidth for data communications over a network that require, for example, "selectively enabling communication of data" if any of (a) "data usage by the user equipment crosses a first threshold," (b) "data communication with an external device is requested by one or more enlisted applications," or (c) a specific "type of content being communicated" is chosen for transfer, which specifies the specific way that the RATs of a user equipment are selectively enabled and/or disabled to increase available bandwidth for data communications. '726/Claims 1 & 10. The particular methods and systems further require "allocat[ing] data to a plurality of data channels for transmission to [an] intermediate server"; "send[ing] the allocated data via the plurality of data channels simultaneously to the intermediate server"; "receiv[ing] data from the intermediate server via the plurality of data channels simultaneously"; and "assembl[ing] data received from the intermediate server via the plurality of data channels," which specifies the information exchanged between the devices in order to facilitate the handoff from the intermediate server to the user equipment and

facilitate the transfer of data therebetween. '726/Claims 1 & 10. Including as described herein, these claimed limitations disclose a particular way in which the patented client-server based architecture can be implemented, including specific information transmitted between each of the devices and a selective enabling of RATs based on specifically claimed criteria to increase available bandwidth in real time – as opposed to using conventional methods and systems to increase available bandwidth, such as those described in the '726 Patent and herein. 726/Abstract; Figs. 1-3; 1:36-60; 2:14-28; & 2:51-7:36.

a. The Claims of the '726 Patent are Directed to Innovative Computer- and Network-Based Systems and Methods

68. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

69. None of the elements that comprise the claimed systems or methods that are described in the claims of the '726 Patent are abstract. Including as described herein, and in the '726 Patent, the system, intermediate server, user equipment, RATs, and data channels ('726/Figs. 1-3 (and associated description in the specification)), among other claimed aspects, are physical and/or tangible things known to a person of ordinary skill in the art ("POSITA"), including in light of the specification; and including in view of the unconventionality and provided technological solutions noted herein. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36.

70. As exemplified by claim 1, the subject claims of the '726 Patent are directed to:

> 1. A system for increasing bandwidth available for data communication,
> the system comprising a user equipment and an intermediate server, wherein,
> the user equipment is configured to:
> allocate data to a plurality of data channels for transmission to the intermediate server;
> wherein each of the data channels is associated with a radio access technology, wherein the user equipment is configured to selectively enable communication of data via a plurality of data channels simultaneously:
> if data usage by the user equipment crosses a first threshold;
> if data communication with an external device is requested by one or more enlisted applications; or

based on [the] type of content being communicated;
send the allocated data via the plurality of data channels simultaneously to the intermediate server;
receive data from the intermediate server via the plurality of data channels simultaneously; and
assemble data received from the intermediate server via the plurality of data channels.

'726/Claim 1.

71. As exemplified by claim 10, the subject claims of the '726 Patent are directed to:

10. A method for increasing bandwidth available for data communication, the method comprising:
selectively enabling communication of data via a plurality of data channels simultaneously:
if data usage by the user equipment crosses a first threshold;
if data communication with an external device is requested by one or more enlisted applications; or
based on [the] type of content being communicated;
allocating data to a plurality of data channels for transmission to an intermediate server;
sending the allocated data via the plurality of data channels simultaneously to the intermediate server;
receiving data from the intermediate server via the plurality of data channels simultaneously; and
assembling data received from the intermediate server via the plurality of data channels.

'726/Claim 10.

72. Claims 1 and 10 of the '726 Patent, quoted above, are exemplary. A POSITA would understand that the language of the '726 Patent claims is not directed merely to a method of generically or conventionally increasing available bandwidth for data communication via RATs. Rather, it comprises the specific aspects noted herein which provided the noted inventive, technological solutions to the problems faced by the inventors. Specifically, as noted herein, the claimed inventions provide inventive, unconventional, and technological solutions to the conventional problems of communicating data between a user device and content server by selectively enabling RATs to improve bandwidth available to a user device with multiple RATs, and corresponding data channels, of the user equipment based on specified, claimed criteria, such

as if data usage by the user equipment crosses a first threshold, including via the intermediate server operating on the application layer for communications between the user equipment and intermediate server, thereby increasing available bandwidth for data communication between the user equipment and content servers.

b. The '726 Claimed Inventions Could not be Done Manually or in One's Head

73. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

74. A POSITA would understand that the claimed solutions could not be done manually, including because they necessarily require implementation via specialized, or specially programmed, computers, including one or more networks, RATs, an intermediate server, a user equipment, and, further, including at least allocating data to a plurality of data channels for transmission to an intermediate server, selectively enabling communication of data via the plurality of data channels simultaneously based on specified, claimed criteria, sending the allocated data via the plurality of data channels simultaneously to the intermediate server, receiving data from the intermediate server via the plurality of data channels simultaneously, and assembling data received from the intermediate server via the plurality of data channels ('726/Claims 1 & 10; Abstract; Figs. 1-3; 1:36-60; 2:14-28; & 2:51-7:36), nor can they be performed in a person's head. Furthermore, for example, the constant open connectivity required for sending and receiving the specified content from the node server at each of the clients is not something that could be done manually or in one's head.

2. The '726 Claimed Inventions Provide Innovative, Unconventional Concepts and Technological Solutions

75. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

76. In sum, including as noted herein, the claimed technologies of the Patent-in-Suit

improved, *inter alia*, prior computer, data communication, and networking technology, including in connection with, among other things:

a. Improving and increasing the efficiencies of the claimed inventions, including over inferior alternative means for achieving the same or similar ends of communicating data, including by enabling the communication of data via a single data channel when there is no need for using multiple data channels, thus reducing or eliminating the lost packets or other, similar, issues resulting from the use of multi-channel technologies. *See, e.g.*, '726/Abstract; 1:36-60; 2:14-28; 2:51-3:7; 3:44-67; & 4:18-7:36.

b. Leveraging the capabilities of already-existing devices, including their Internet connection capabilities (including through use of custom hardware and/or software), including by shifting the transfer of data from the user device to the intermediate server, to greatly enhance the functionality of data communication systems, including because the intermediate server, which is more proximately located to the user device and has additional resources to the user device, including higher bandwidth capabilities, including due to the use of wired connectivity, mediates the communication of data between the user device and destination server, including via the application layer. *See, e.g.*, '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36.

c. Intelligently enabling communication of data via the plurality of data channels made available by multiple RATs, simultaneously, when a determination is made that use of a single data channel would result in spottier, less reliable, or otherwise inferior data communication. *See, e.g.*, '726/Abstract; 1:36-60; 2:14-28; 2:51-3:7; 3:44-67; & 4:18-7:36.

77. The '726 patented inventions also provide improved computer and network efficiency at least because they permit the selective enabling and/or use of multiple RATs, and the data channels therein, for data communication, including over the Internet, including via the use of an intermediate server operating over the application layer, thus, *inter alia*, reducing the complexity and cost of computing systems while retaining a consistent, reliable user experience, including by utilizing the intermediate server for assembling and disassembling data streams using the device's existing RATs and network, including Internet, protocols, including as described in the '726 Patent. The inventor did more than simply apply current technology to an existing problem. The inventions, as embodied in the claims of the '726 Patent, were a significant advancement in data communication systems and methods. The inventions covered by the claims of the '726 Patent

comprise utilization of the Internet and networking technologies to create a novel architecture for selectively enabling RATs to improve bandwidth available to a user device with multiple RATs, and corresponding data channels, of the user equipment based on specified, claimed criteria, such as if data usage by the user equipment crosses a first threshold, including via the intermediate server operating on the application layer for communications between the user equipment and intermediate server, thereby increasing available bandwidth for data communication between the user equipment and content servers – something that, to this day, is simply not done on any large scale with respect to user devices.

78. These noted improvements over the prior art represent meaningful limitations and/or inventive concepts based upon the state of the art nearly a decade ago. Further, including in view of these specific improvements, the inventions of the claims of the '726 Patent, when such claims are viewed as a whole and in ordered combination, are not routine, well-understood, conventional, generic, existing, commonly used, well known, previously known, typical, and the like nearly a decade ago, including because, until the inventions of the claims of the Patent-in-Suit, the claimed inventions were not existing or even considered in the field, and, in fact, went against the conventional methods.

79. The claims of the '726 Patent, including as a whole and where applicable in ordered combination, comprise, *inter alia*, a non-conventional and non-generic arrangement of communications between user equipment, intermediate servers, and destination data servers that is a technical improvement to the communications between these devices as operated in a conventional manner, including those improvements noted herein.

80. The claimed inventions are necessarily rooted in computer technology, *i.e.*, network content provisioning technology and data communication technology, and comprise improvements over prior technologies in order to overcome the problems, including those noted herein,

specifically arising in the realm of computer networks and data communications. The claimed solutions amount to an inventive concept for resolving the particular problems and inefficiencies noted herein, including in connection to data communications between a user device and destination server over multiple RATs of the user device, including as described.

a. The '726 Claimed Inventions Provide Technological Solutions to Technological Problems

81. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

82. The technical problems addressed by the claimed inventions of the '726 Patent include, *inter alia*, the communication of data, including delivery of content, including high-bandwidth content, over a network, including the Internet, from a user device to a destination server, including via the use of an intermediate server and/or multiple RATs of the user device, in a reliable, scalable manner to provide a smooth, satisfactory user experience, which, at the time of the '726 patented inventions, was unavailable, impossible, impractical, and/or cumbersome, including because, as noted herein, communicating data by selectively enabling RATs to improve bandwidth at the time of the invention whereby selectively enabling RATs to improve bandwidth available to a user device with multiple RATs over the application layer via an intermediate server in satisfactory, smooth, and/or reliable manner was unavailable (for example, devices simply did not support use of multiple RATs); impossible (for example, devices supporting multiple RATs permitted only an all-or-none operation, rather than selective enablement); impractical (for example, increasing bandwidth would require every potential destination server to modify their hardware and/or software, thus limiting the potential destination servers to which the user could connect); and/or cumbersome (for example, users would have to investigate whether a potential destination server supported multiple RAT connections). Conventional methods further lacked the ability to provide the use of a special intermediate server which handled the communications between the user device

and destination server as an intermediary and lacked the ability to selectively enable one or more of the multiple RATs of the user device for connection to the intermediate server, including in order to improve and/or increase available bandwidth to the user device. Further, physical limitations existed which limited available resources, including bandwidth, storage, and computing power, which could result in the system being unworkable and/or crashing, or otherwise resulting in additional, unwanted, and hindering issues, including as noted herein.

83. An additional problem that existed with conventional systems was the large potential for packet loss when operating multiple RATs of the user device. For example, including as noted herein, conventional systems at the time comprising multiple RATs operated, if at all, on an all-or-none basis. At the time, conventional devices either had multiple RATs, but only used a single RAT at any given time, or, if a device did permit the use of multiple RATs, the device would only be able to use all of them at the same time, without any selective enabling of any given RAT. However, due to method of operation for multiple RATs, these devices suffered from a largely increased risk of packet loss or related issues. As a result, these devices may have seen increased bandwidth, but the reliability of this bandwidth, and the data communications thereon, were less than ideal and, often, simply unusable for the type of data being communicated, such as live video or other media streaming.

84. Technical solutions provided by the claimed inventions of the ’726 Patent to the technical problems faced include the use of an intermediate server-based architecture wherein the intermediate server may be added as an intermediary between the user device and destination server for use as a means of “converting” the data communications from the user device, which occur on the application layer between the user device and intermediate server via the corresponding data channels of the available RATs of the user device in communication with corresponding data channels of available RATs on the intermediate server, into data

communications the ultimate destination data or content server is able to receive, which occur between the intermediate server and destination server via ethernet or other hardwire connection therebetween. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36. Including as noted herein, this, in turn, provides the ability for the owners of the ultimate data and/or content servers to reduce the complexity and cost of their computing systems while retaining a consistent, reliable user experience, including by utilizing the intermediate server for assembling and disassembling data streams, thereby eliminating the need for these servers to be modified to support the newer, unconventional multichannel technologies described herein. '726/Abstract; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36.

85. The inventions claimed in the '726 Patent further represent specific improvements in the functionality and capabilities of computer networking, data communications, video distribution services, and web services and networks, including in regard to, *inter alia*, network content distribution services, systems, and network databases, including a network architecture and infrastructure. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. The inventions claimed in the '726 Patent, for example, improve the functionality of network systems, for example, by providing a means for selectively enabling multiple RATs of a user device in order to increase and/or improve available bandwidth of the user device when communicating data with and between an ultimate destination server, including via the use of the intermediate server, to provide a reliable, smooth, and consistent user experience. '726/Abstract; 2:14-28; & 6:5-7:36.

86. Including as described in the '726 Patent, and as noted herein, the claimed inventions include unconventional and inventive technological solutions to the technical problems that existed at the time, including to increasing and/or improving, for example, ease-of-use, functionality, efficiency, and reliability in systems for data communication over a network and network architecture and infrastructure. For example, the claimed inventions of the '726 Patent, including

as described herein, provide technical solutions that improve, *inter alia*, computer and network connectivity technology, including for distribution and communication of high-bandwidth content over a network, including by permitting the selective enabling and/or use of multiple RATs, and the data channels therein, for data communication, including over the Internet, including via the use of an intermediate server operating over the application layer.

87. In this way, the claimed inventions of the '726 Patent reduce the use of the connection between the user device and destination server – thus reducing potential losses therebetween, including via the use of an intermediate server more proximately located to the user device – thus permitting the user device to form a more reliable and direct connection so that the data is first transferred to the intermediate server, assembled, and then forwarded to the destination server, and vice versa, including via the selective enabling of one or more of multiple RATs of the user device – thus reducing potential costs to the user for use of more costly RAT services, such as mobile data while increasing and/or improving available bandwidth only when required based on specified criteria. The inventions of the '726 Patent provide a technical solution to this problem, among others, by offloading the less reliable connections from occurring between the user device and destination server to between the user device and the intermediate server, while utilizing the intermediate server to process and forward data communications to and from the destination server, thus increasing reliability and satisfaction of the user experience.

b. The '726 Claimed Inventions Provide Innovative, Unconventional Solutions

88. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

89. Including as noted herein, what was convention at the time comprised, for example, a pure server-client architecture with user device communicating with the destination server over either a single RAT or all of the device's available RATs at the same time, which, at best, either

caused the data to necessarily be small so that it could be communicated over the low bandwidth of a single RAT, resulting in the data potentially being of poor quality or was attempted to be brute-forced by throwing costly bandwidth, hardware, and software at the problem, including as shown in the prior art systems described in the specification, including the cited *Kahn* and *Kawaii* references, and herein. However, including due to limitations on available resources and the lack of consistent, reliable, and scalable systems to provide a reliable user experience, users seeking high-bandwidth content or communication of high-bandwidth data were often simply unable to do so because it was unavailable because their devices were unable to successfully do so, or were rife with packet loss and/or other issues relating to the use of all of the RATs of the user's device at all times. By leveraging network, RAT, and data communication systems, the patented inventions improved upon the conventional methods of communication of high-bandwidth content and data over a network, including the Internet, which suffered from the many issues noted herein.

90. Unconventional solutions provided by the claimed inventions of the '726 Patent include the leveraging of the resources, such as bandwidth and computing power and/or storage, of a proximately-located intermediate server in close communication with the user device, including via the use of corresponding RATs on both the user device and intermediate server, in order to create a network system wherein the intermediate server handles the communications between the user device and ultimate destination data server, rather than having the user device attempt communication directly with the destination server, limited by the lower available bandwidth of the user device.

91. Including as set forth in the specification of the '726 Patent, the bandwidth-heavy communications overhead of transmitting high-bandwidth content is initially performed on a far more reliable network between the user device and intermediate, resulting in much less likelihood a user would experience any packet loss or other issues related to data communications over RATs,

including over multiple RATs simultaneously, and, furthermore, permitting only fully assembled data to be transferred from the intermediate server to the destination server over ethernet or other similar hardwire communication channels, effectively permitting more reliable data communications despite the use of RATs on the user device. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36.

92. The patented inventions of the '726 Patent further provided unconventional solutions by at least leveraging the selectively enabling one or more of the RATs of the user device to provide the use of their additional resources, such as bandwidth, and ensuring the connection between the user device and intermediate server are sufficient to support the data sought to be communicated. '726/Abstract; 1:36-60; 2:14-28; & 2:51-7:36. Including as noted herein, and as argued during prosecution of the '726 Patent, it was unconventional to have such selectively enabled communication and/or network-based systems, as opposed to the conventional method of the use of either a single RAT or all of them.

93. Further, the asserted claims of the '726 Patent claim unconventional systems and methods which provide a means of selectively enabling and/or use of multiple RATs, and the data channels therein, for data communication, including over the Internet, including via the use of an intermediate server operating over the application layer – as opposed to using conventional systems and methods to communicate data over a network, such as those described in the '726 Patent and herein.

c. The '726 Claimed Inventions Provide Substantial Benefits

94. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

95. The claimed content provisioning systems and methods of the '726 Patent provide a number of benefits over conventional systems and methods, including conventional pure single

server-client systems, single RAT user devices, and multi-RAT user devices lacking selective enabling of RATs. These benefits include the ability of the user device to accommodate vastly more bandwidth on an as-needed basis; communicate a larger amount of data using the same resources; provide cost savings to users by permitting use of more costly RAT services only when necessary, including by reducing the amount of data used and/or connectivity time; provide cost savings to owners of destination servers by eliminating the need for them to upgrade or replace hardware and/or software to support the newer, unconventional technologies and/or protocols, including reduced costs for implementing and maintaining their systems; distributing the resource load across the user device and intermediate server; better scalability and the ability to selectively enable additional RATs for a potentially exponential growth in available bandwidth to the user device; and/or improved system reliability to user devices. '726/Claims 1 & 10.

96. In addition, conventional systems and methods would require heavy investment by either and/or both the user and the owner of the destination server, including because they would have to invest in new and/or upgraded equipment to ensure support of the newer, unconventional technologies and/or protocols on both ends of the data communication, meaning they would be required to pay for additional hardware and/or software as well as the maintenance costs therefor. The claimed inventions of the '726 Patent allow, for example, the system to permit data communication to occur via a specialized, more proximately-located intermediate server via the use of connectivity between the RATs of the user device and corresponding RATs of the intermediate server, thus, *inter alia*, offloading and reducing resource usage of the user's device, resulting in less investment needed by the user, and reducing resource usage of the data server owner, resulting in less investment needed by the destination data server owner. The claimed inventions of the '726 Patent further allow, for example, selective enabling, and use, of one or more of the RATs of the user device, resulting in increased and/or improved bandwidth availability

of the user device depending on the data being communicated, or other specified criteria. The claimed inventions of the '726 Patent allowed devices with lower bandwidth and intermittent internet connectivity, such as dial-up and wireless or mobile devices, to work more reliably within these systems when communicating data with, *inter alia*, a destination server, and, further, enable only those RATs necessary to meet the requirements of the data communication, thus resulting in potential reduction of the use of more costly RAT services, saving the user additional, unnecessary costs.

d. The '726 Claimed Inventions Provide Inventive Solutions

97. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

98. Consistent with the above discussion, including the problems solved that had been faced by conventional content provisioning systems and provisioning content to clients over a network, and further in consideration of the '726 Patent specifications, the prosecution history, and cited prior art, a POSITA would understand that the claimed "user equipment and [] intermediate server, wherein the user equipment is configured to: allocate data to a plurality of data channels for transmission to the intermediate server, wherein each of the data channels is associated with a RAT, wherein the user equipment is configured to selectively enable communication of data via the plurality of data channels simultaneously: if data usage by the user equipment crosses a first threshold; if data communication with an external device is requested by one or more enlisted applications; or based on type of content being communicated; send the allocated data via the plurality of data channels simultaneously to the intermediate server; receive data from the intermediate server via the plurality of data channels simultaneously; and assemble data received from the intermediate server via the plurality of data channels," including based on the use of an intermediate server architecture, including the selective enabling of RATs, including in

combination with the claims of the '726 Patent, as a whole, is an inventive technological solution, including in view of the benefits and unconventional solutions this involves and contributes to. '726/Claims 1 & 10; Abstract; Figs. 1 & 2; 1:36-60; 2:14-28; & 2:51-7:36.

99. For example, using certain technology claimed in the '726 Patent, (for example, the intermediate server and user equipment, including the RATs therein, in conjunction), it becomes possible to, among other things, selectively enable one or more RATs of the user device for communication with corresponding RATs of the intermediate server so that the intermediate server may assemble the data received from all enabled RATs for forwarding to the ultimate destination data server. '726/Abstract; Figs. 1 & 2; 1:36-60; 2:14-28; 2:51-4:39; 4:62-5:58; 6:5-15; 6:25-41; & 6:52-7:36. The '726 claimed inventions comprise inventive improvements over prior technologies in order to overcome problems, including those technical problems noted herein, related to computer networks, data communication, and content provision (for example, related to content providers) including in combination with the provision of high-bandwidth content and/or data over the Internet from a data server, including via selectively enabling one or more RATs of the user device for use in communicating said data from the user device to the destination server, including via the use of the intermediate server. For example, the claimed inventions provide inventive solutions related to the conventional issues and inefficiencies (for example, as described herein) that were related to communicating large amounts of data over limited bandwidth RATs used in conventional user devices over a network, such as the Internet, via the use of an intermediate server by selectively enabling any or all available RAT of the user device to transmit the data to the intermediate server for reassembly and forwarding to the destination server, and vice versa.

100. The '726 patented inventions further provide inventive improvements in network, including data communication network, architecture and infrastructure, including because the

unconventional intermediate server and client architecture and shifting of communications and workload from between the user device and destination server to between the user device and intermediate server improve over the conventional, singular server-client architecture. Including as noted herein, in doing so, the claimed inventions reduce the workload of the user's device and use of the device's limited resources by providing for various tasks to be run and take place on the intermediate server which acts as an intermediary between the user device and destination server. Specifically, a POSITA would understand that the avoidance of overloading the available resources of the user device, including by offloading onto an architecture of user device-intermediate server-destination server, was inventive and serves as an improvement in network, including data communication network, architecture and/or infrastructure.

3. The Claims of the Patent-in-Suit do not Unreasonably Preempt their Respective Fields

101. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

102. Including as noted herein, the '726 Patent does not claim merely the abstract idea of "improving bandwidth available to a user device" that provides no inventive concept. Instead, the '726 Patent claims specific methods and systems for improving bandwidth available to a user device, including via the application layer and an intermediate server and user equipment, including via the user equipment configured to allocate data to a plurality of data channels associated with RATs for transmission to the intermediate server, and selectively enable communication of data via the plurality of data channels simultaneously: if data usage by the user equipment crosses a first threshold, if data communication with an external device is requested by one or more enlisted applications, or based on type of content being communicated, sending the allocated data via the plurality of data channels simultaneously to the intermediate server, receiving data from the intermediate server via the plurality of data channels simultaneously, and

assembling data received from the intermediate server via the plurality of data channels, where infringement of the patent claims can be readily avoided while still practicing any alleged abstract idea, given that the patent claims do not purely read on any alleged abstract idea. Indeed, the claims of the '726 Patent do not improve bandwidth available to a user device as in the prior art, but, instead, improve bandwidth by providing an intermediate server and user equipment communicating and/or operating on the application layer to selectively enable data channels of RATs based on specific criteria to increase available bandwidth as discussed extensively herein.

103. For example, "improving bandwidth available to a user device" may be practiced outside of the limited scope of the patent claims at least by:

a. The use of a system such as that described in the *Rollins* reference (U.S. Patent No. 6,738,348), cited by the PCT examiner;

b. The use of a system such as that described in the *Chandrasekaran* reference (U.S. Patent No. 8,693,499), cited by the PCT examiner;

c. The use of a system such as that described in the *Hitt* reference (U.S. Patent No. 8,787,873), cited by the PCT examiner;

d. The use of a system such as that described in the *Kawaii* reference (U.S. Patent Publication No. 2003/0174733), cited by the U.S. patent examiner;

e. The use of a system such as that described in the *Ehara* reference (U.S. Patent Publication No. 2009/0207772), cited by the U.S. patent examiner;

f. The use of a system such as that described in the *Kahn* reference (U.S. Patent Publication No. 2011/0202641), cited by the U.S. patent examiner;

g. The use of a system such as that described in the *Watson* reference (U.S. Patent Publication No. 2011/0222404), cited by the U.S. patent examiner;

h. The use of a system such as that described in the *Gerber* reference (U.S. Patent Publication No. 2012/0052814), cited by the U.S. patent examiner;

i. The use of a system such as that described in the *Long* reference (U.S. Patent Publication No. 2012/0219085), cited by the U.S. patent examiner;

j. The use of a system such as that described in the *Kazmi* reference (U.S. Patent Publication No. 2013/0051261), cited by the U.S. patent examiner;

k. The use of a system such as that described in the *Jung* reference (U.S. Patent Publication No. 2013/0121203), cited by the U.S. patent examiner;

l. The use of a system such as that described in the *Piesinger* reference (U.S. Patent Publication No. 2014/0044009), cited by the U.S. patent examiner;

m. The use of a system such as that described in the *Sikri* reference (U.S. Patent Publication No. 2014/0200046), cited by the U.S. patent examiner;

n. The use of a system such as that described in the *Iwami* reference (U.S. Patent Publication No. 2016/0173939), cited by the U.S. patent examiner;

o. The use of a system such as that described in the *Le* reference (U.S. Patent Publication No. 2016/0308907), cited by the U.S. patent examiner;

p. The use of multiple devices with individual connections;

q. The use of a system with devices each comprising increased bandwidth;

r. The use of a system having non-radio access technologies; and/or

s. The use of a system with the destination server comprising one or more of the multi-path protocols.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 10,454,726

104. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

105. As the assignee and owner of the Patent-in-Suit, Plaintiff is bearer of all substantial rights therein, including all rights, title, and interest in the '726 Patent, including the right and standing to sue for any and all past, present, and future infringement thereof, and to collect damages for any such past, present, or future infringement.

106. Claim 1 of the '726 Patent covers a "system for increasing bandwidth available for data communication, the system comprising a user equipment and an intermediate server, wherein, the user equipment is configured to allocate data to a plurality of data channels for transmission to the intermediate server, wherein each of the data channels is associated with a radio access technology, wherein the user equipment is configured to selectively enable communication of data via the

plurality of data channels simultaneously: if data usage by the user equipment crosses a first threshold; if data communication with an external device is requested by one or more enlisted applications; or based on type of content being communicated; send the allocated data via the plurality of data channels simultaneously to the intermediate server; receive data from the intermediate server via the plurality of data channels simultaneously; and assemble data received from the intermediate server via the plurality of data channels."

107. Claim 10 of the '726 Patent covers a "method for increasing bandwidth available for data communication, the method comprising selectively enabling communication of data via a plurality of data channels simultaneously: if data usage by a user equipment crosses a first threshold; if data communication with an external device is requested by one or more enlisted applications; or based on type of content being communicated; allocating data to the plurality of data channels for transmission to an intermediate server, wherein each of the data channels is associated with a radio access technology; sending the allocated data via the plurality of data channels simultaneously to the intermediate server; receiving data from the intermediate server via the plurality of data channels simultaneously; and assembling data received from the intermediate server via the plurality of data channels."

108. Defendants have infringed, and are now infringing, the '726 Patent, including at least claims 1 and 10, in this Judicial District and elsewhere, in violation of 35 U.S.C. § 271 through actions comprising the making, using, offering for sale, selling, importing, and/or practicing, without authority from Plaintiff, systems and methods for increasing available bandwidth for data communications of user data communication devices over a network, such as the Internet, including by selectively enabling RATs on the device, including to communicate with an ultimate destination via an intermediate server via Defendants' Smart Blending Technology ("SBT") systems, including as claimed in the '726 asserted claims. On information and belief, Defendants

practice the claimed methods and provides the claimed systems with and via their SBT services and systems, including in combination with Defendants' other services and systems, including, without limitation, their Resilient Wireless Technology, 5G Cellular, Bonded Cellular, and Hybrid Encoding Technology services and systems, and including Defendants' products related thereto, including, without limitation, their EnGo Mobile Transmitters (including at least the EnGo 3, Engo 3s, Engo 3x, Engo 265, and Engo 263 products), PathWay Encoders (including at least the PathWay E and PathWay EC products), WayPoint Receivers (including at least the WayPooint 3, WayPoint 204, and WayPoint 50 products), CuePoint Return Servers (including at least the CuePoint 100 and CuePoint 50 products), GateWay Network Aggregation Devices (including at least the GateWay 211, GateWay M6E6F and GateWay M6E6 product), FlexPoint Transceivers (including at least the FlexPoint 111 product), NewBook Application, and/or LivePlus Application (including at least the LivePlus Desktop Application, LivePlus Android Application, and/or LivePlus iOS Application).

109. Without limitation, and for example, the infringing instrumentality comprising the SBT systems comprise a system for increasing bandwidth available for data communication, comprising a user equipment and an intermediate server, wherein, the user equipment is configured to allocate data to a plurality of data channels for transmission to the intermediate server, wherein each of the data channels is associated with a radio access technology, wherein the user equipment is configured to selectively enable communication of data via the plurality of data channels simultaneously: if data usage by the user equipment crosses a first threshold; if data communication with an external device is requested by one or more enlisted applications; or based on type of content being communicated; send the allocated data via the plurality of data channels simultaneously to the intermediate server; receive data from the intermediate server via the plurality of data channels simultaneously; and assemble data received from the intermediate server

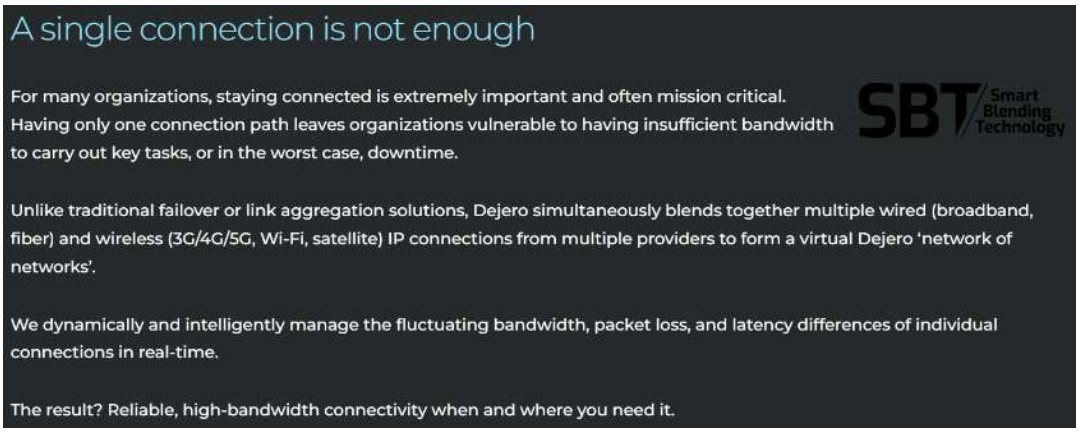
via the plurality of data channels.

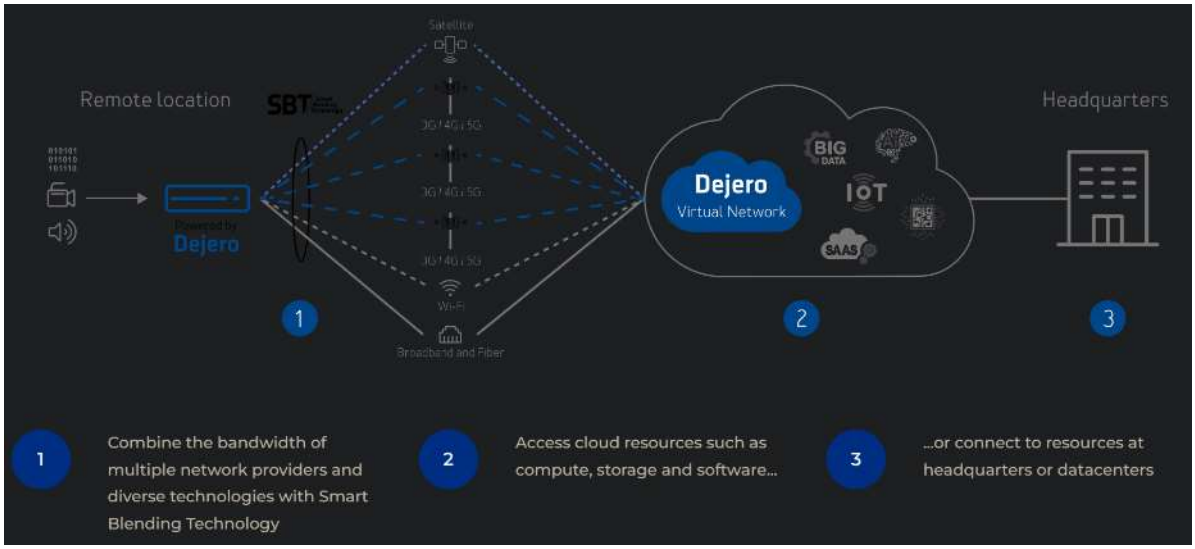
110. Without limitation, and for example, the infringing instrumentality comprising the SBT systems comprise and practice a method for increasing bandwidth available for data communication, comprising selectively enabling communication of data via a plurality of data channels simultaneously: if data usage by a user equipment crosses a first threshold; if data communication with an external device is requested by one or more enlisted applications; or based on type of content being communicated; allocating data to the plurality of data channels for transmission to an intermediate server, wherein each of the data channels is associated with a radio access technology; sending the allocated data via the plurality of data channels simultaneously to the intermediate server; receiving data from the intermediate server via the plurality of data channels simultaneously; and assembling data received from the intermediate server via the plurality of data channels.

111. Further, the SBT system comprises systems and methods which comprise enterprise equipment, including a user device and intermediate server, wherein the user device comprises multiple wireless technologies, including 4G/5G mobile data technologies, Wi-Fi data technologies, and/or satellite data technologies, which permit communication with the intermediate server over one or more of these wireless technologies, which are enabled and/or disabled as needed based on specified criteria, such as the type of data communicated or bandwidth required, so that the intermediate server receives individual pieces of allocated data from the user device via each of the enabled wireless technologies, reassembles these data pieces into the full data to be communicated, and transfers that data to an ultimate destination server via the intermediate server's ethernet or other communication technology.

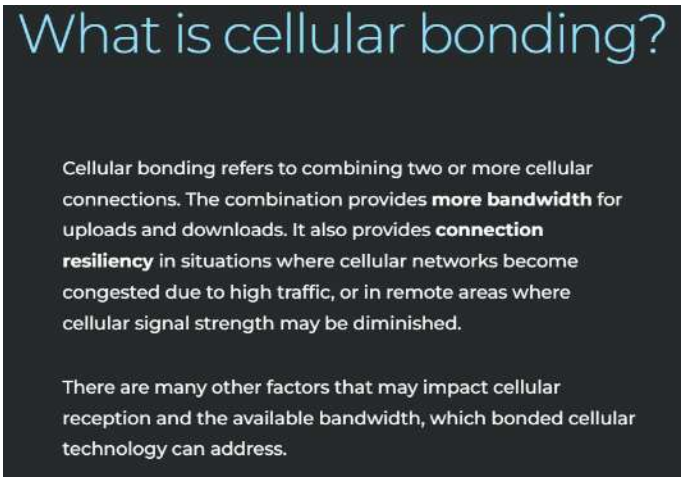
112. For example, the SBT system permits improved data communications, including via increased available bandwidth therefor, between a client device and remote server, including via,

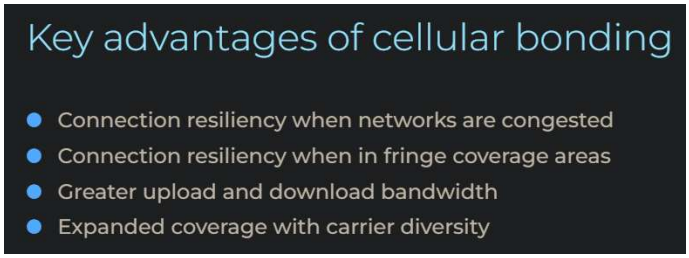
inter alia, the use of an intermediate server and the selective enabling of one or more RATs of the client device which correspond to respective RATs of the intermediate server, including based on specified criteria, including based on, *inter alia*, the type of data communicated, the application and/or method requesting communication, and/or bandwidth required for communication:





See, e.g., Dejero Smart Blending Technology page located at https://www.dejero.com/technology/smart-blending-technology





Aggregating multiple cellular connections

Applications relying on **wireless internet connectivity** — particularly those needing higher upload speeds to transmit uninterrupted high-quality live video or real-time data — can use multi-modem cellular bonding devices to aggregate multiple cellular connections to achieve
the required bandwidth and connection resilience. These devices use 3G / 4G (including LTE) / 5G modems to connect to the carrier networks.

Bonded cellular technology aggregates bandwidth from multiple connections. These connections may be with the same or different carriers. This example shows a scenario where upload bandwidth from each connection may be extremely limited, but in aggregate, there's enough available bandwidth for high-definition, low-latency live video transmission.

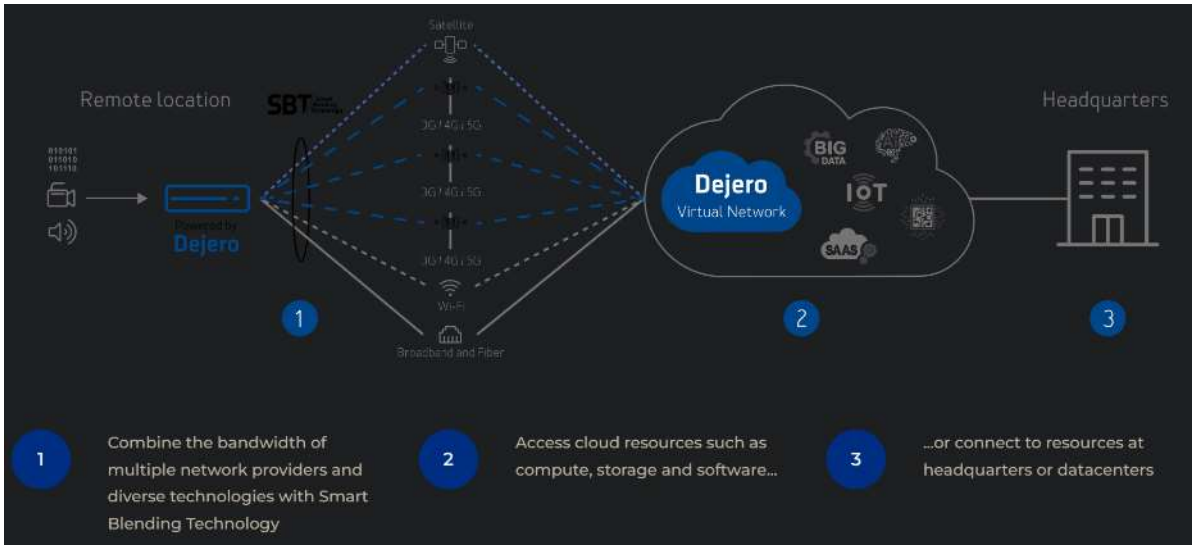
Beyond cellular bonding

While bonding cellular connections may provide enough bandwidth for high-quality live video and real-time data exchange in mobile and nomadic scenarios, there are scenarios where aggregating other connections makes sense for greater connection diversity, resiliency, and continuity.

Dejero ***Smart Blending Technology*** not only aggregates 3G/4G/5G cellular connections, but also combines other wireless connections such as Wi-Fi and satellite, as well as cable/DSL/fiber broadband connections in a fixed location. In fact, any Internet Protocol (IP) connection from multiple providers can be aggregated to form a virtual 'network of networks' with Dejero's technology.

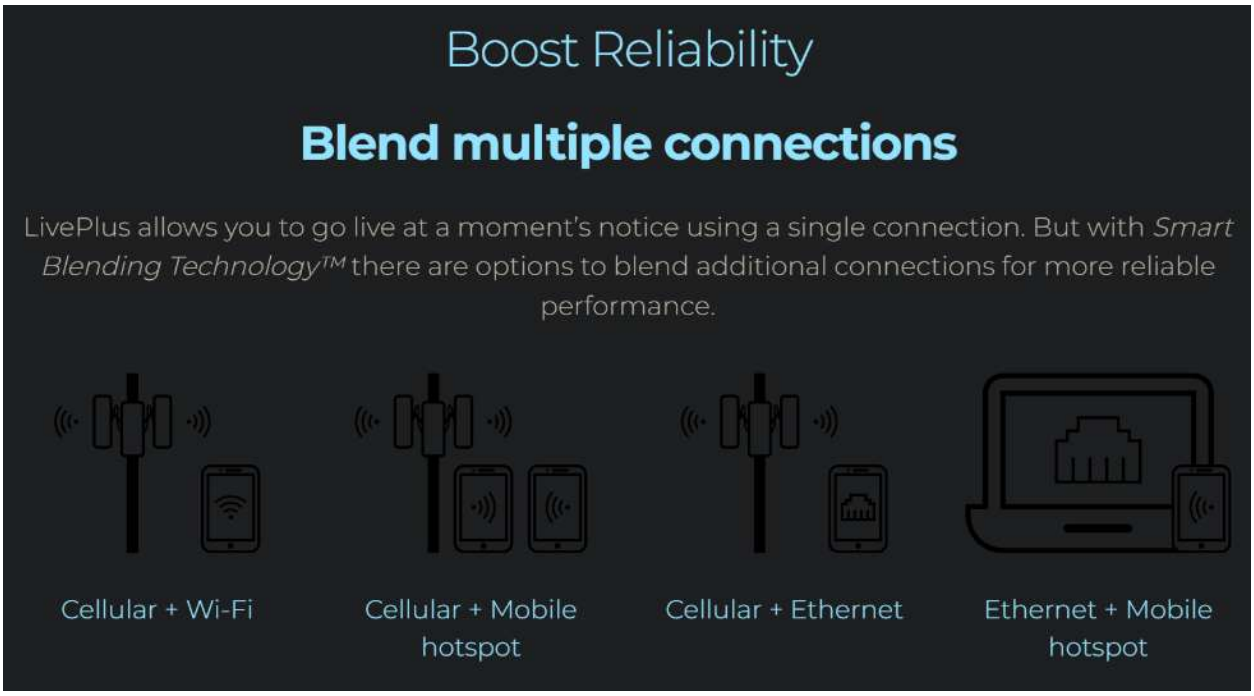
While each connection path has its own characteristics, Dejero dynamically and intelligently manages the fluctuating bandwidth, packet loss, and latency differences of individual connections **in real-time**, seamlessly redirecting packets and maintaining **session persistence** if connections degrade, or are lost.

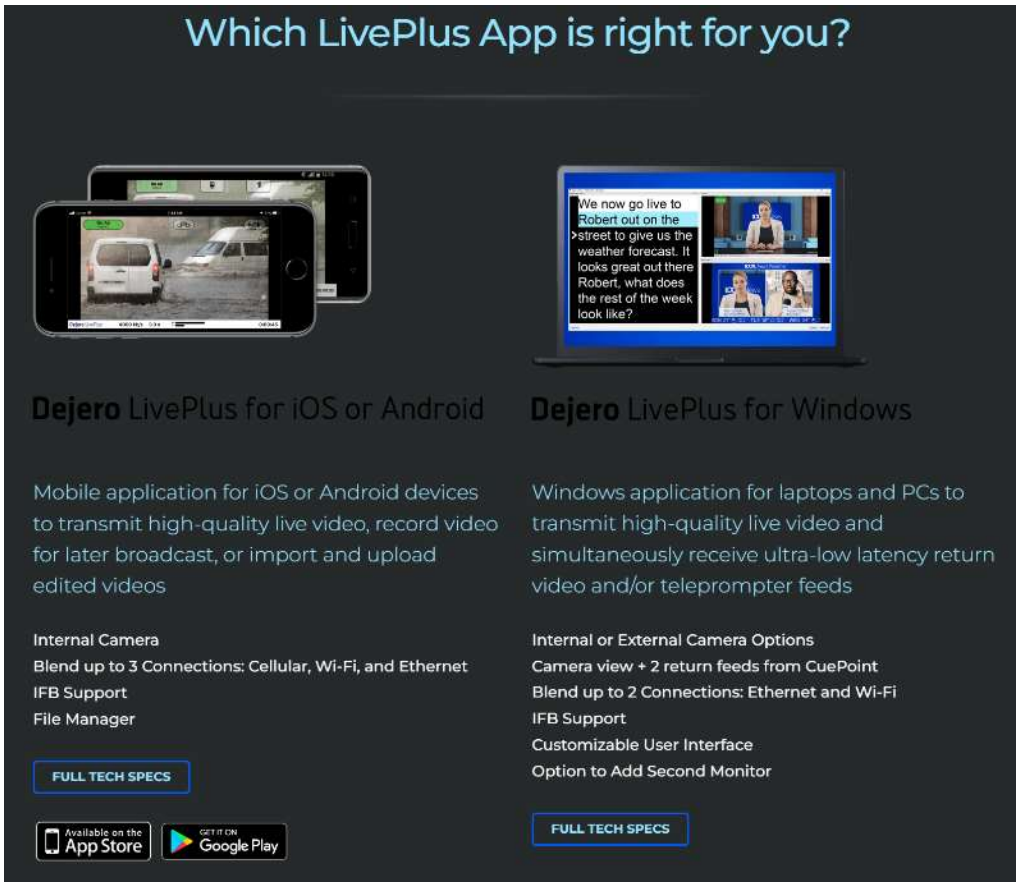
The result? Resilient, high-bandwidth internet connectivity when and where you need it. That means video, voice and data can be sent and received **uninterrupted**.



See, e.g., Dejero Cellular Bonding Technology page located at https://www.dejero.com/technology/cellular-bonding

Transmit high-quality live video with latency as low as 0.8 seconds by intelligently combining multiple connections.
SBT
Smart
Blending
Technology
3G
4G
LTE
5G

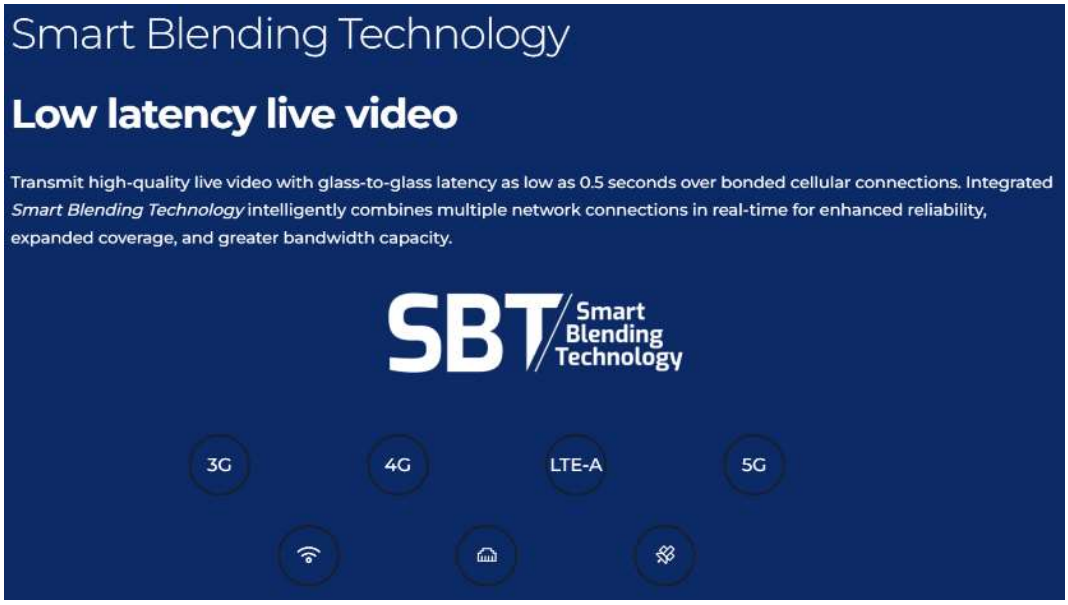

Boost Reliability
Blend multiple connections
LivePlus allows you to go live at a moment's notice using a single connection. But with *Smart Blending Technology™* there are options to blend additional connections for more reliable performance.
Cellular + Wi-Fi
Cellular + Mobile hotspot
Cellular + Ethernet
Ethernet + Mobile hotspot



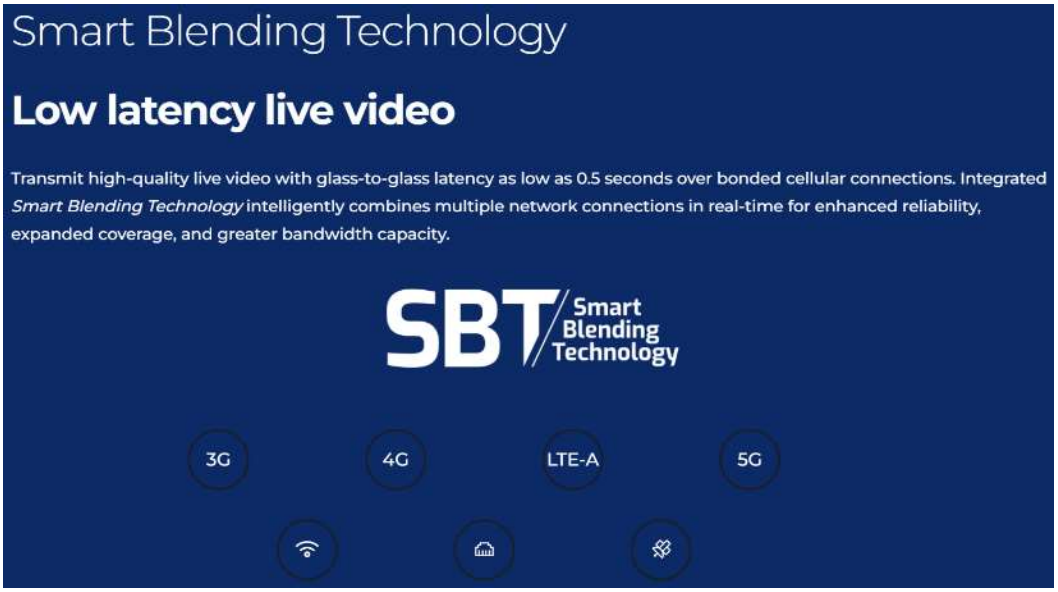
See, e.g., Dejero LifePlus Product page located at https://www.dejero.com/products/liveplus

See, e.g., Dejero LifePlus Product Technical Specifications page located at https://www.dejero.com/products/liveplus/tech-specs

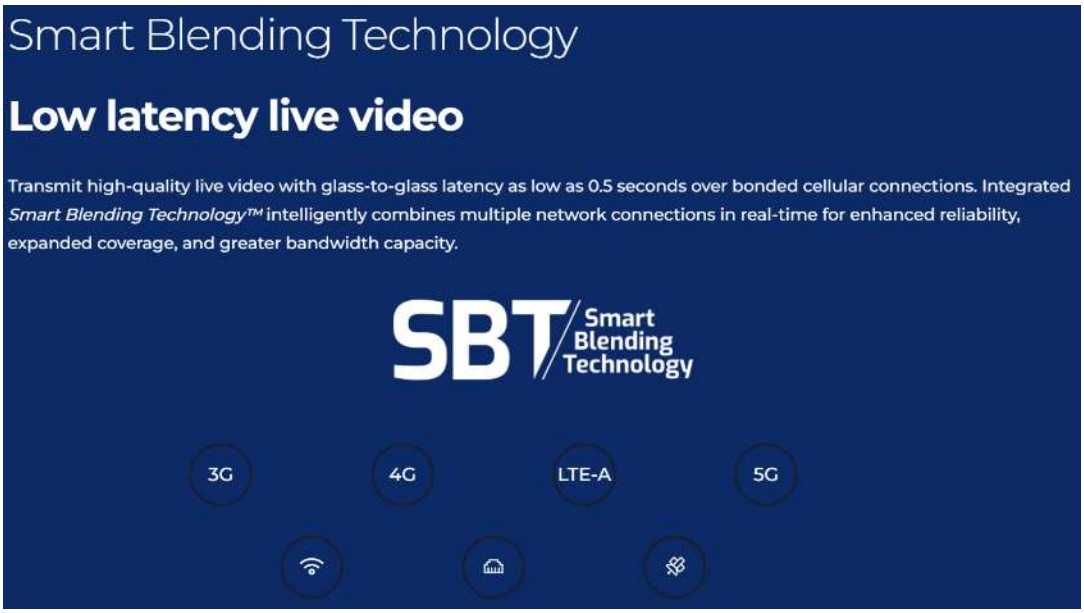
113. The SBT system comprises user equipment. For example, the SBT system includes a device provided by Dejero for use by the user:



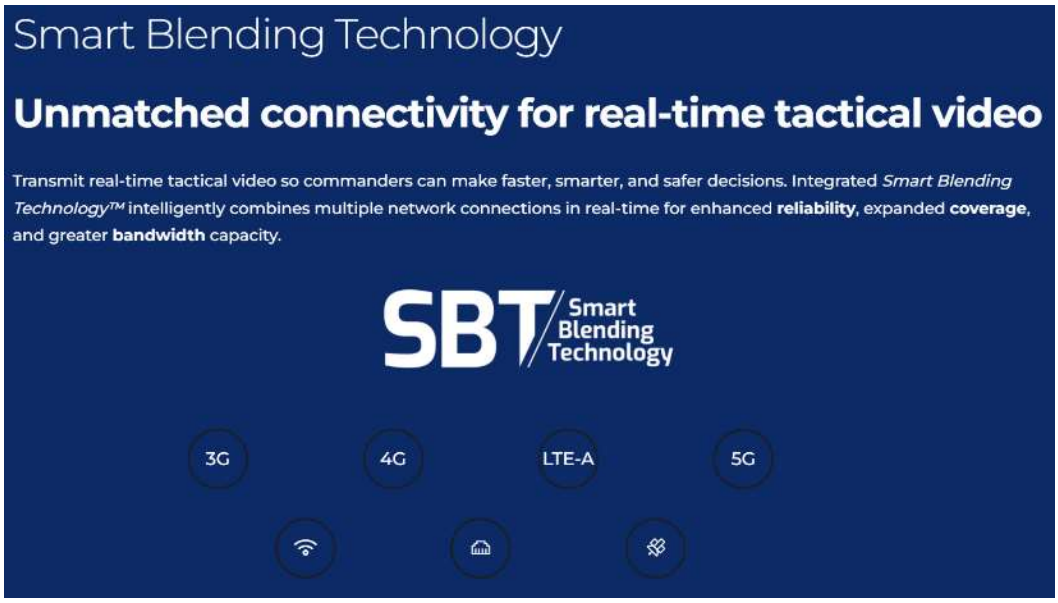
See, e.g., Dejero EnGo 3 Product page located at https://www.dejero.com/products/engo-3



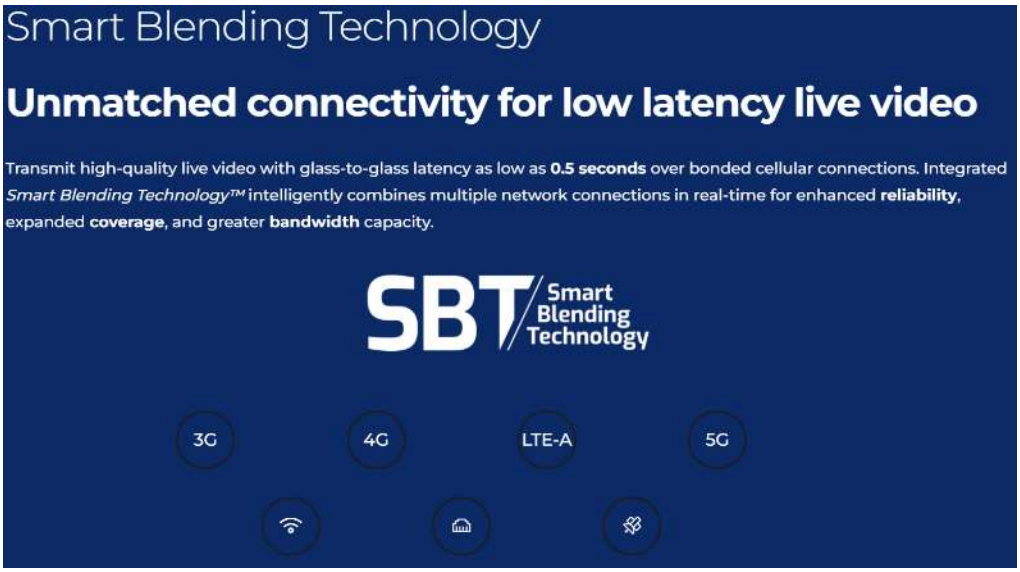
See, e.g., Dejero EnGo 3s Product page located at https://www.dejero.com/products/engo-3s



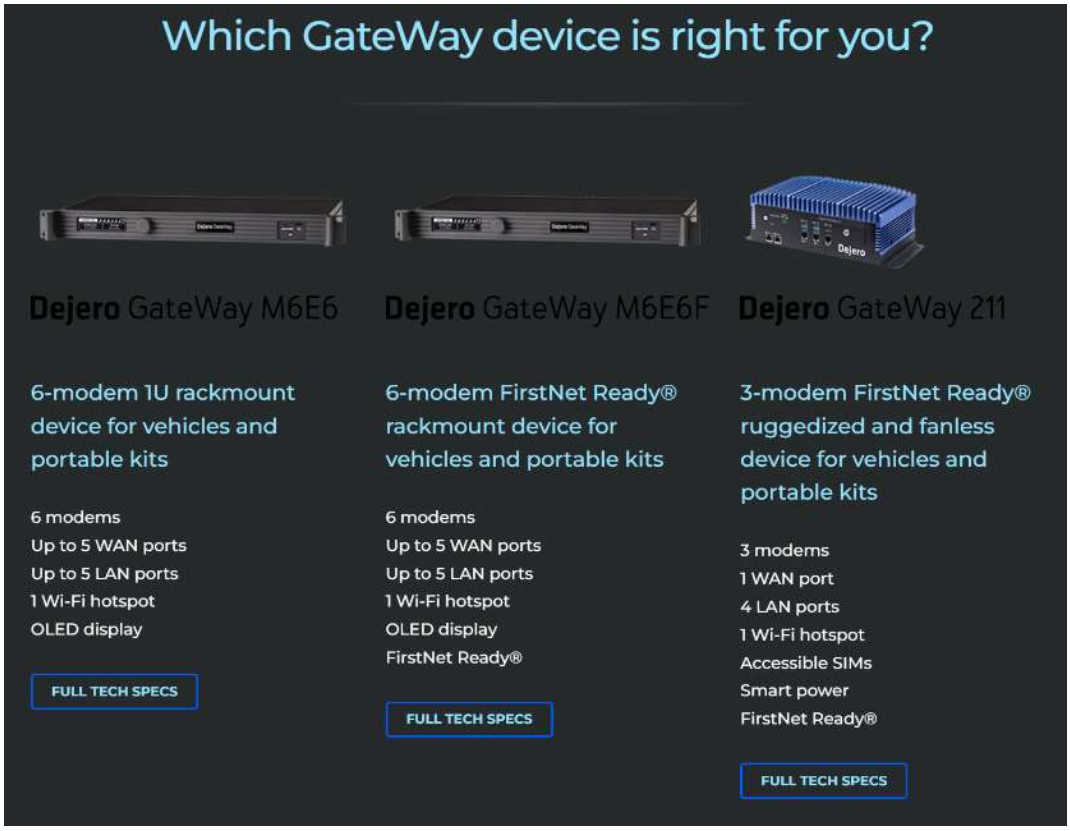
See, e.g., Dejero EnGo 3x Product page located at https://www.dejero.com/products/engo-3x



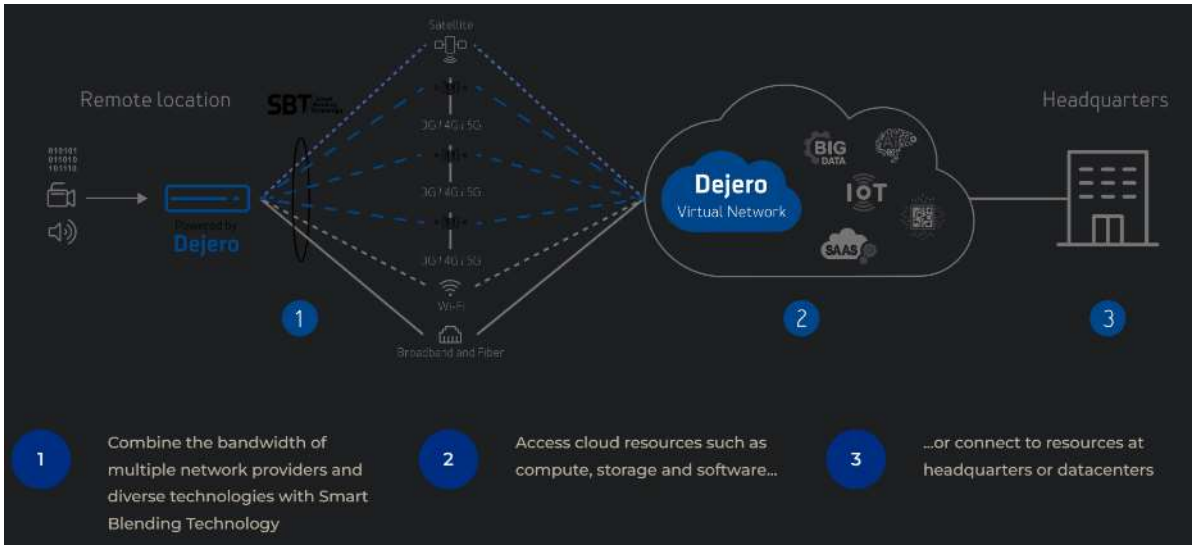
See, e.g., Dejero EnGo 263 Product page located at https://www.dejero.com/products/engo-263



See, e.g., Dejero EnGo 265 Product page located at https://www.dejero.com/products/engo-265



See, e.g., Dejero GateWay Products page located at https://www.dejero.com/products/gateway



See, e.g., Dejero Smart Blending Technology page located at https://www.dejero.com/technology/smart-blending-technology

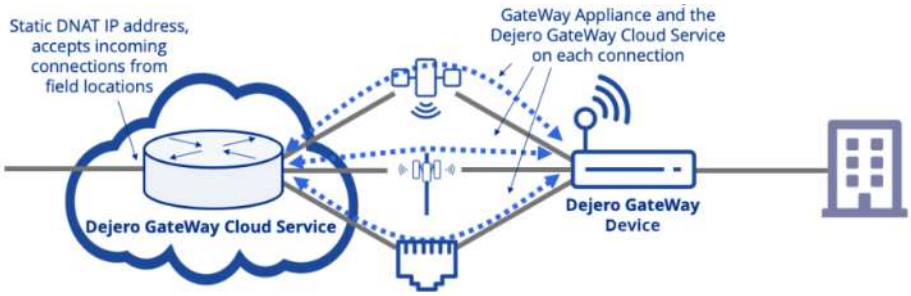
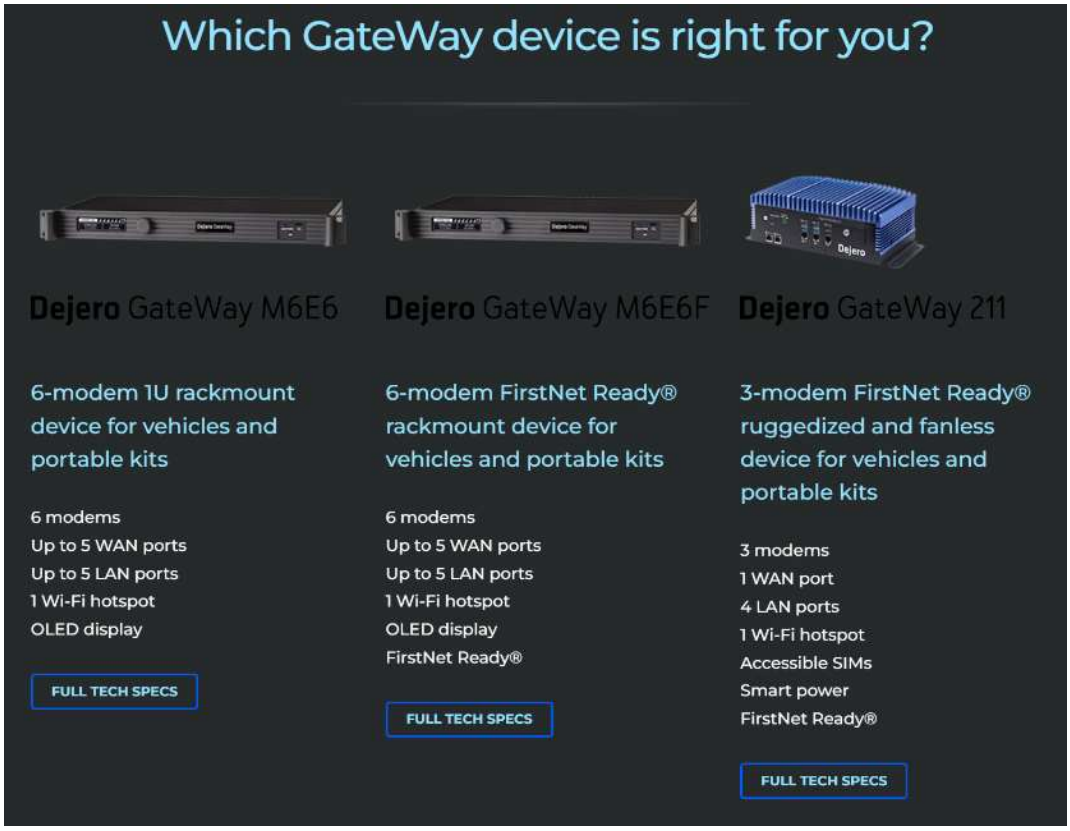


Figure 4 – Central office routing with Dejero *Smart Blending Technology* is just a mirror image of the field location deployment

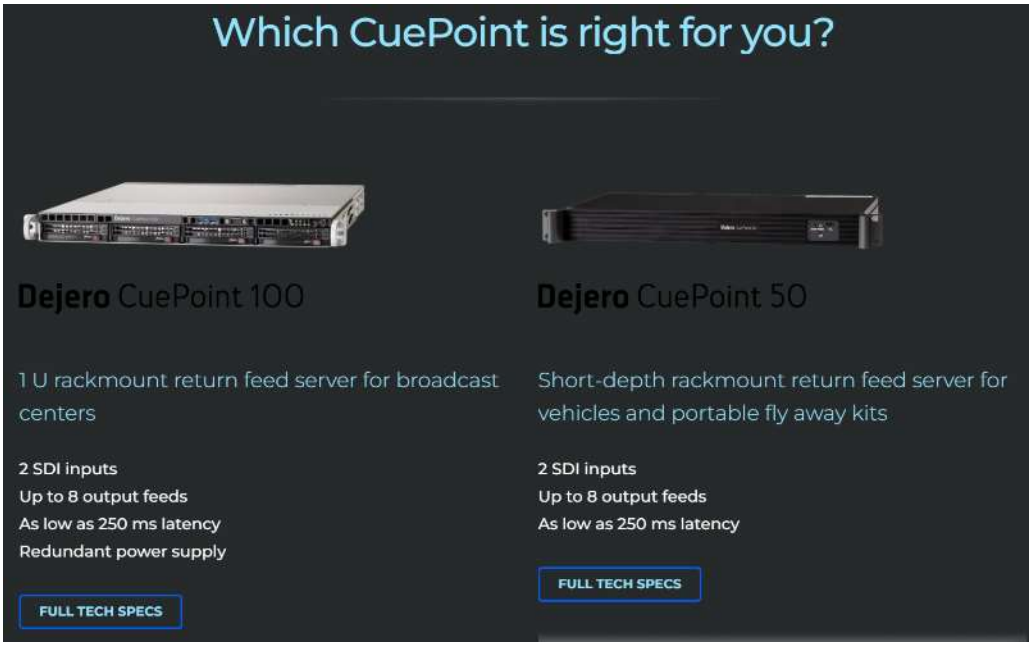
The architecture consists of a remote terminal in the field (Dejero GateWay network aggregation device) linked to an endpoint in the cloud (Dejero GateWay Cloud Service)—very similar to cloud-based SD-WAN

See, e.g., Dejero Smart Blending Technology White Paper located at https://go.dejero.com/hubfs/Resources/Dejero%20Smart%20Blending%20Technology.pdf

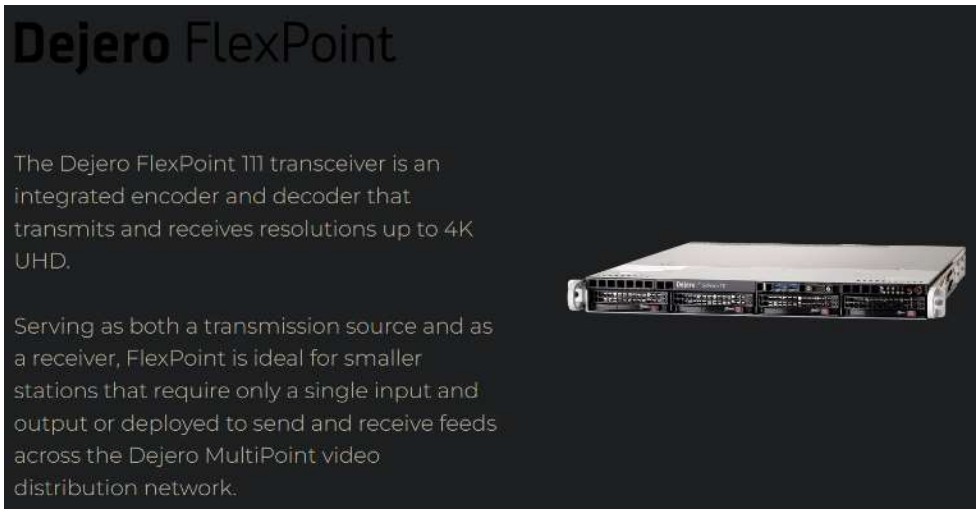
114. The SBT system comprises an intermediate server. For example, the SBT system comprises a server, gateway, or similar networking device, either physical or cloud-based, for serving as an intermediary between the user equipment and a selected destination server:



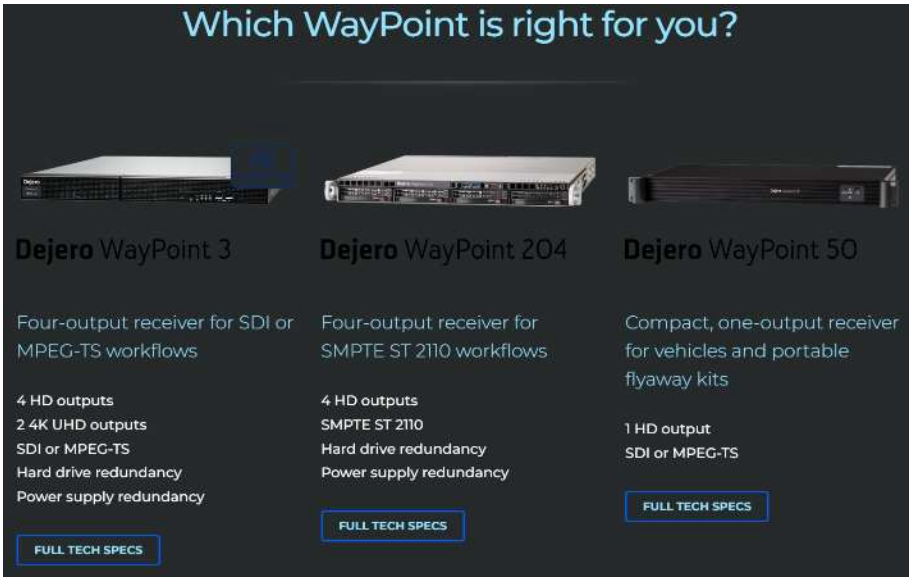
See, e.g., Dejero GateWay Products page located at https://www.dejero.com/products/gateway



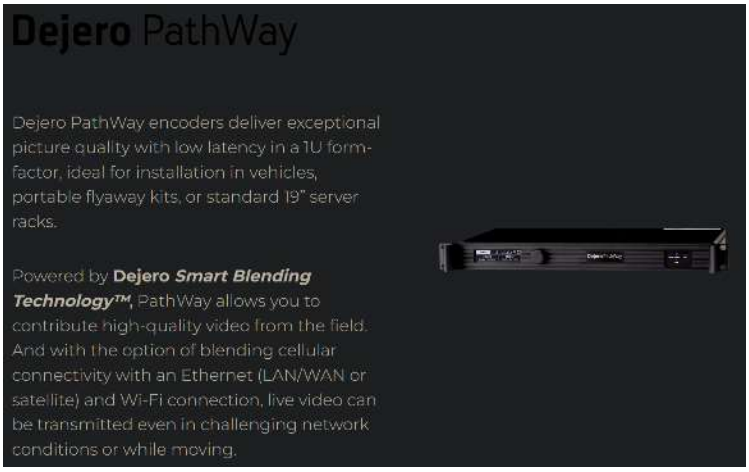
See, e.g., Dejero CuePoint Products page located at https://www.dejero.com/products/cuepoint

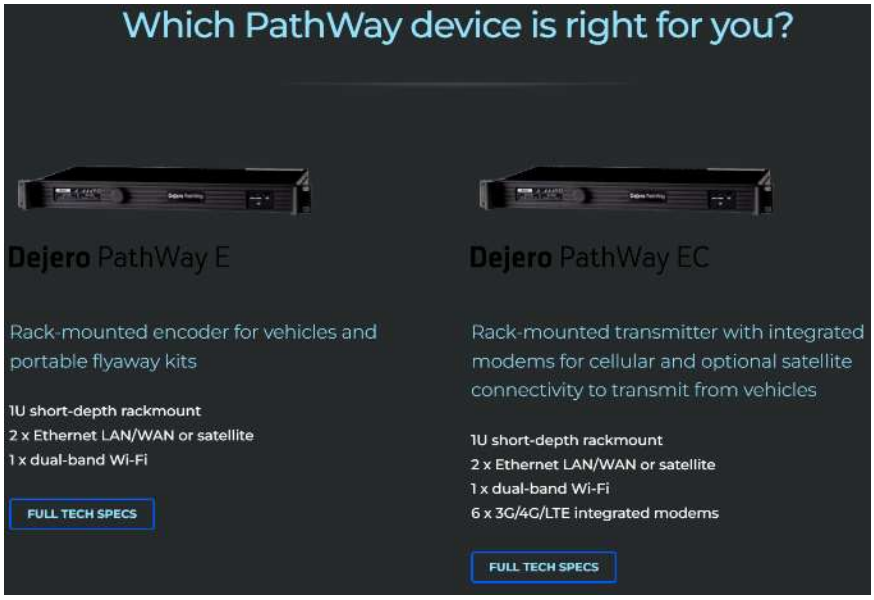


See, e.g., Dejero FlexPoint Product page located at https://www.dejero.com/products/flexpoint

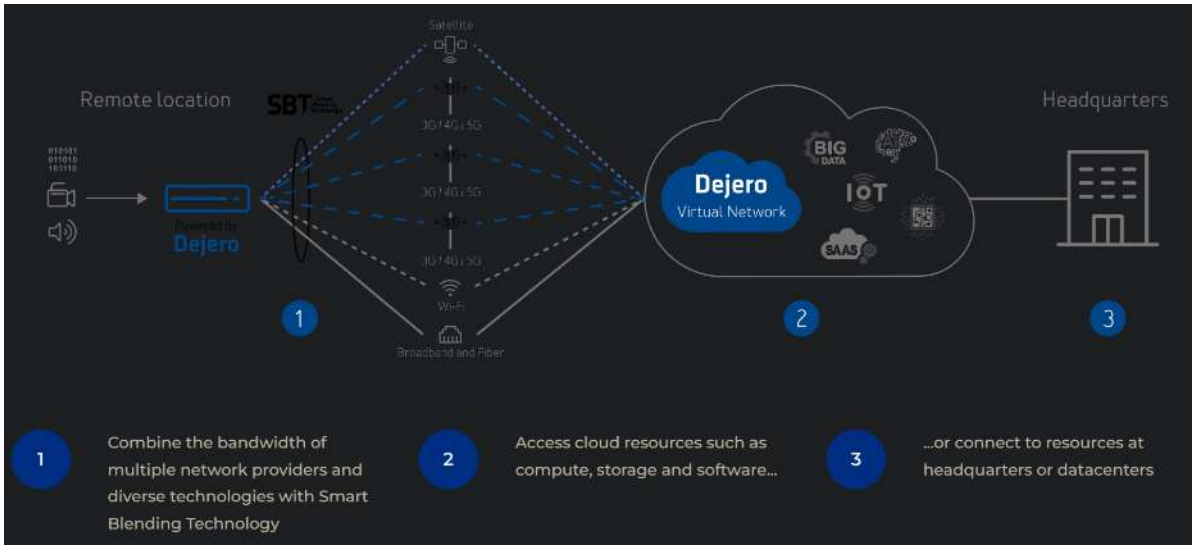


See, e.g., Dejero WayPoint Product page located at https://www.dejero.com/products/waypoint





See, e.g., Dejero PathWay Product page located at https://www.dejero.com/products/pathway



See, e.g., Dejero Smart Blending Technology page located at https://www.dejero.com/technology/smart-blending-technology

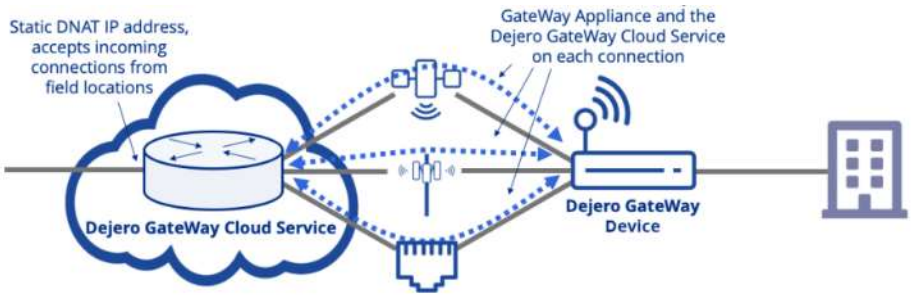


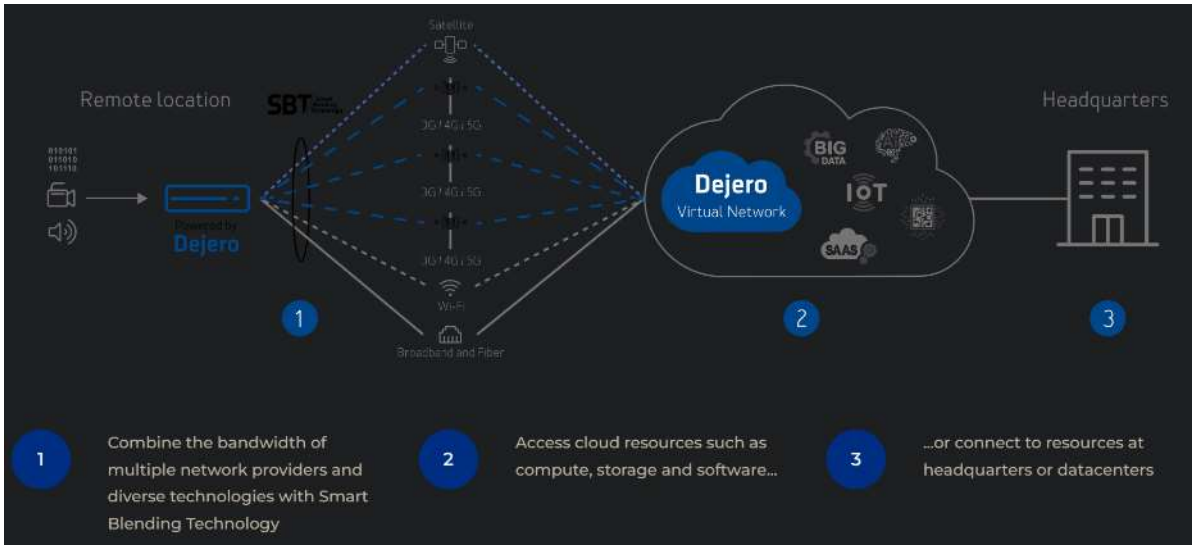
Figure 4 – Central office routing with Dejero *Smart Blending Technology* is just a mirror image of the field location deployment

> The architecture consists of a remote terminal in the field (Dejero GateWay network aggregation device) linked to an endpoint in the cloud (Dejero GateWay Cloud Service)—very similar to cloud-based SD-WAN

See, e.g., Dejero Smart Blending Technology White Paper located at https://go.dejero.com/hubfs/Resources/Dejero%20Smart%20Blending%20Technology.pdf

115. The SBT system comprises the user equipment configured to selectively enable communication of data via the plurality of data channels simultaneously: if data usage by the user equipment crosses a first threshold; if data communication with an external device is requested by one or more enlisted applications; or based on type of content being communicated. For example, the SBT system permits the use of any number of available wireless technologies of the user equipment, including based on bandwidth needs, the data being communicated (*e.g.*, live video streams), and/or to enhance reliability of the communications:

> Unlike traditional failover or link aggregation solutions, Dejero simultaneously blends together multiple wired (broadband, fiber) and wireless (3G/4G/5G, Wi-Fi, satellite) IP connections from multiple providers to form a virtual Dejero 'network of networks'.



See, e.g., Dejero Smart Blending Technology page located at https://www.dejero.com/technology/smart-blending-technology

Aggregating multiple cellular connections

Applications relying on **wireless internet connectivity** — particularly those needing higher upload speeds to transmit uninterrupted high-quality live video or real-time data — can use multi-modem cellular bonding devices to aggregate multiple cellular connections to achieve the required bandwidth and connection resilience. These devices use 3G / 4G (including LTE) / 5G modems to connect to the carrier networks.

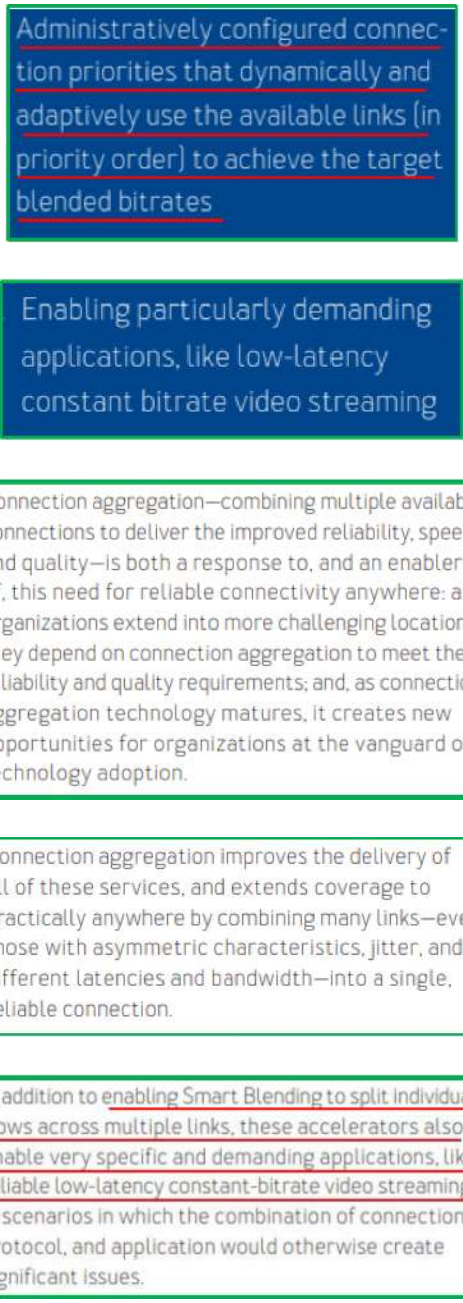
While bonding cellular connections may provide enough bandwidth for high-quality live video and real-time data exchange in mobile and nomadic scenarios, there are scenarios where aggregating other connections makes sense for greater connection diversity, resiliency, and continuity.

The result? Resilient, high-bandwidth internet connectivity when and where you need it. That means video, voice and data can be sent and received **uninterrupted**.

See, e.g., Dejero Cellular Bonding Technology page located at https://www.dejero.com/technology/cellular-bonding

Connections are dynamically added to, or removed from, the aggregate pool without needing reconfiguration by an administrator

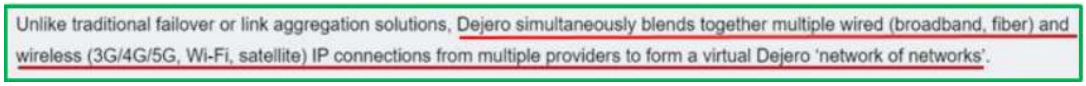
Additionally, Smart Blending has the operational advantage that new connections can be added dynamically, without needing reconfiguration by an administrator, because the state of the connection (up versus down) and connection characteristics are discovered automatically.

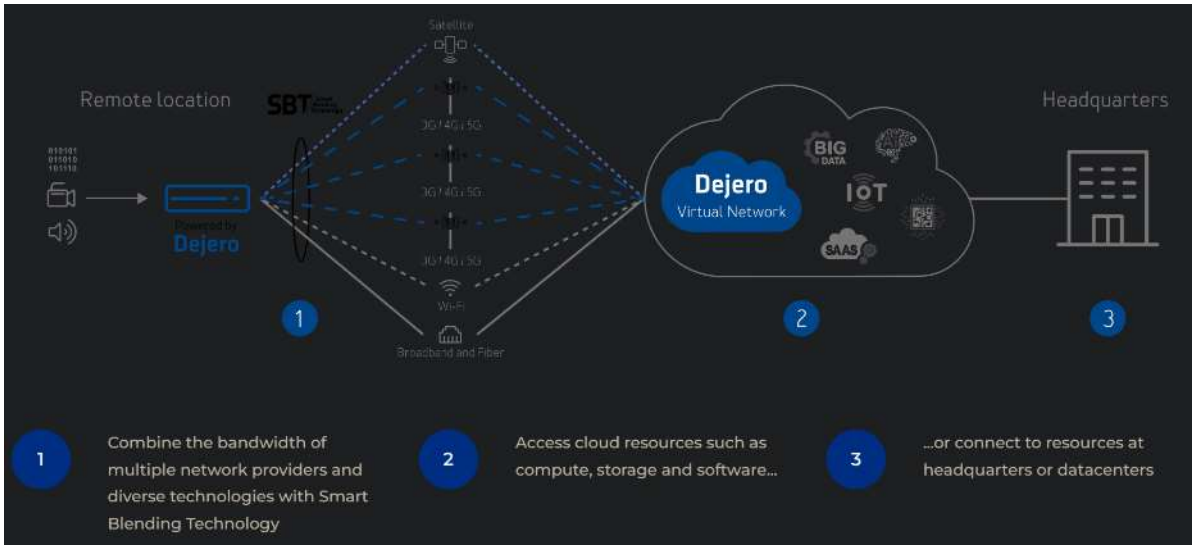


See, e.g., Dejero Smart Blending Technology White Paper located at https://go.dejero.com/hubfs/Resources/Dejero%20Smart%20Blending%20Technology.pdf

See, e.g., Dejero Cellular Bonding Technology White Paper located at https://go.dejero.com/hubfs/Resources/Bonded%20Cellular.pdf

116. The SBT system comprises the user equipment configured to allocate data to a plurality of data channels for transmission to the intermediate server, wherein each of the data channels is associated with a radio access technology. For example, the SBT system comprises the portable device to establish connectivity with the intermediate server on each of the enabled RATs, including in order to facilitate communication between the portable device and the intermediate server, with such communication therebetween occurring via the portable device allocating portions of the communicated data to each of the RATs, included as needed to maximize the data transfer between said devices:





Whether accessing cloud services or connecting your mobile workforce and remote locations to your data center or headquarters, Dejero Smart Blending Technology provides enhanced reliability, expanded coverage, and greater bandwidth to organizations.

See, e.g., Dejero Smart Blending Technology page located at https://www.dejero.com/technology/smart-blending-technology

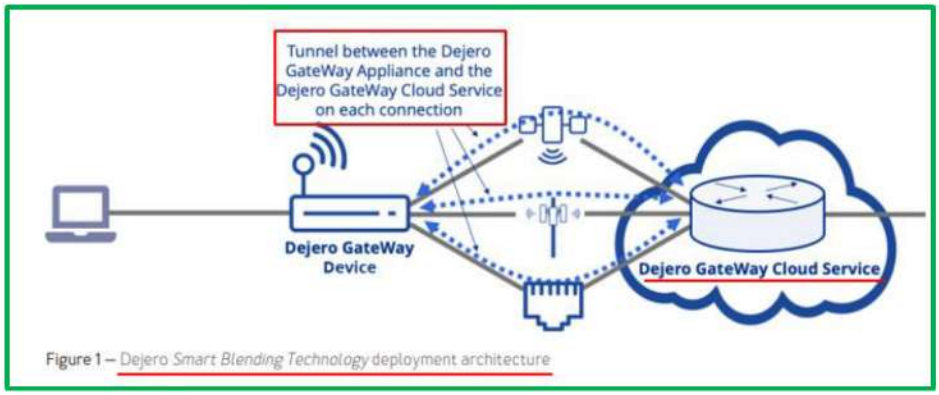


Figure 1 – Dejero *Smart Blending Technology* deployment architecture

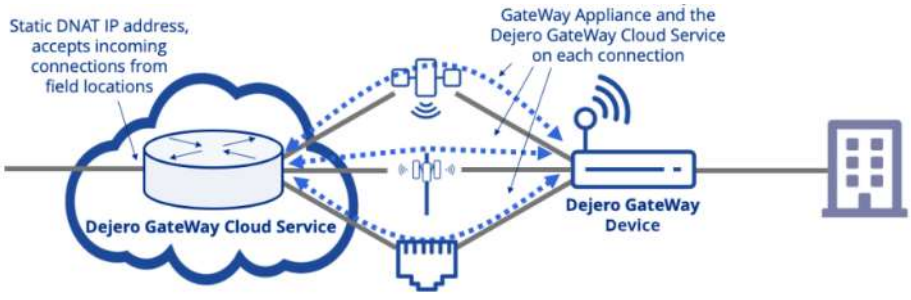
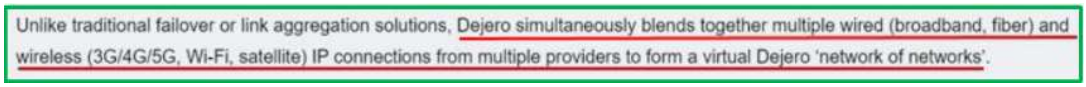


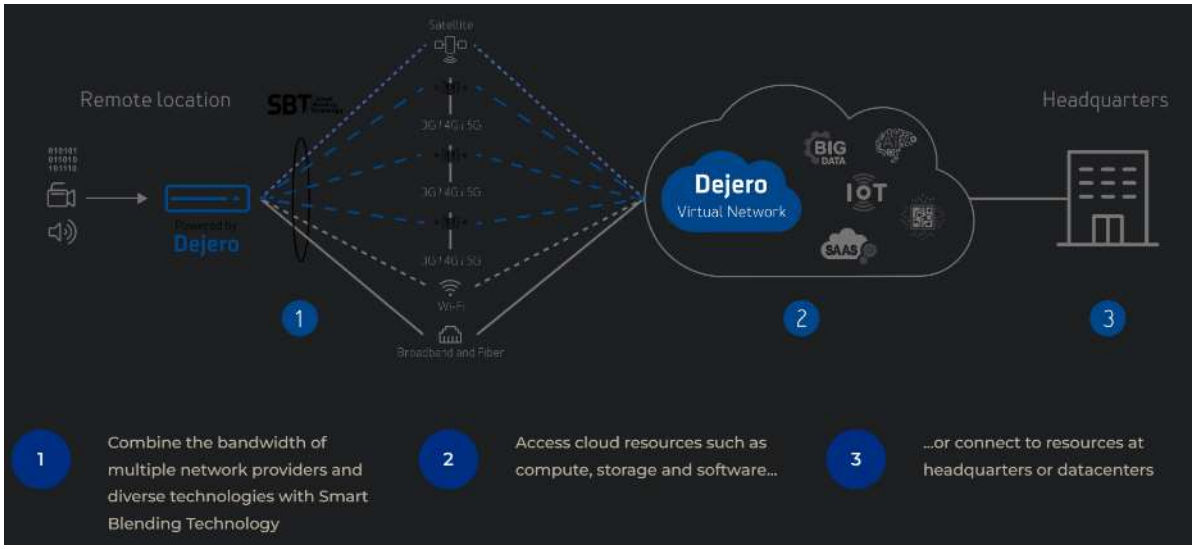
Figure 4 – Central office routing with Dejero *Smart Blending Technology* is just a mirror image of the field location deployment

See, e.g., Dejero Smart Blending Technology White Paper located at https://go.dejero.com/hubfs/Resources/Dejero%20Smart%20Blending%20Technology.pdf

See, e.g., Dejero Cellular Bonding Technology White Paper located at https://go.dejero.com/hubfs/Resources/Bonded%20Cellular.pdf

117. The SBT system comprises the user equipment configured to send the allocated data via the plurality of data channels simultaneously to the intermediate server. For example, the SBT system comprises the portable device sending and/or transferring the data being communicated over each of the selectively enabled RATs based on the allocation schema determined by the portable device:





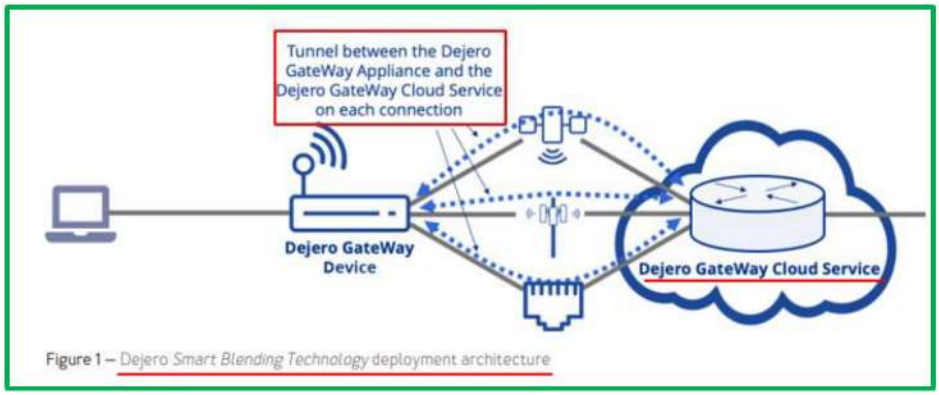
> Whether accessing cloud services or connecting your mobile workforce and remote locations to your data center or headquarters, Dejero Smart Blending Technology provides enhanced reliability, expanded coverage, and greater bandwidth to organizations.

See, e.g., Dejero Smart Blending Technology page located at https://www.dejero.com/technology/smart-blending-technology

> All of these elements combine to allow Dejero *Smart Blending Technology* to deliver reliable, lower-cost Internet and cloud connectivity while still meeting demanding quality of service needs—in other words, to deliver reliable connectivity, anywhere.

> The architecture consists of a remote terminal in the field (Dejero GateWay network aggregation device) linked to an endpoint in the cloud (Dejero GateWay Cloud Service)—very similar to cloud-based SD-WAN

> In stark contrast, Dejero *Smart Blending Technology* delivers reliable connectivity anywhere, providing the reliable first- and last-mile connectivity required for cloud computing, online collaboration, the secure exchange of video and data, and other demanding applications.



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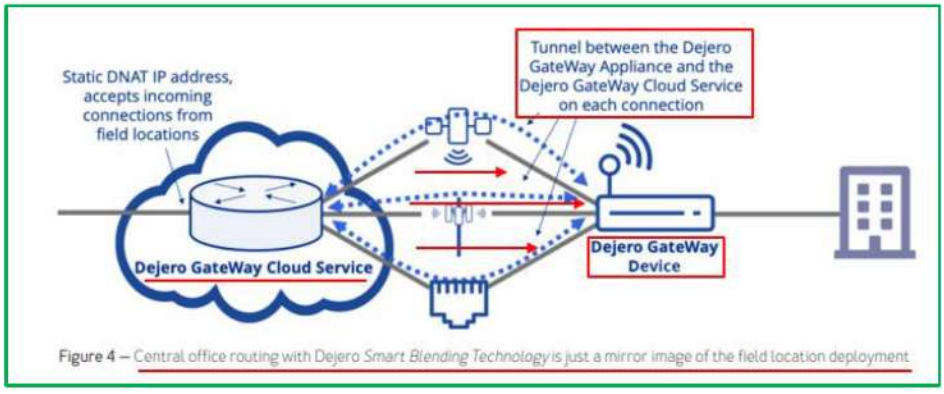


Figure 4 – Central office routing with Dejero *Smart Blending Technology* is just a mirror image of the field location deployment

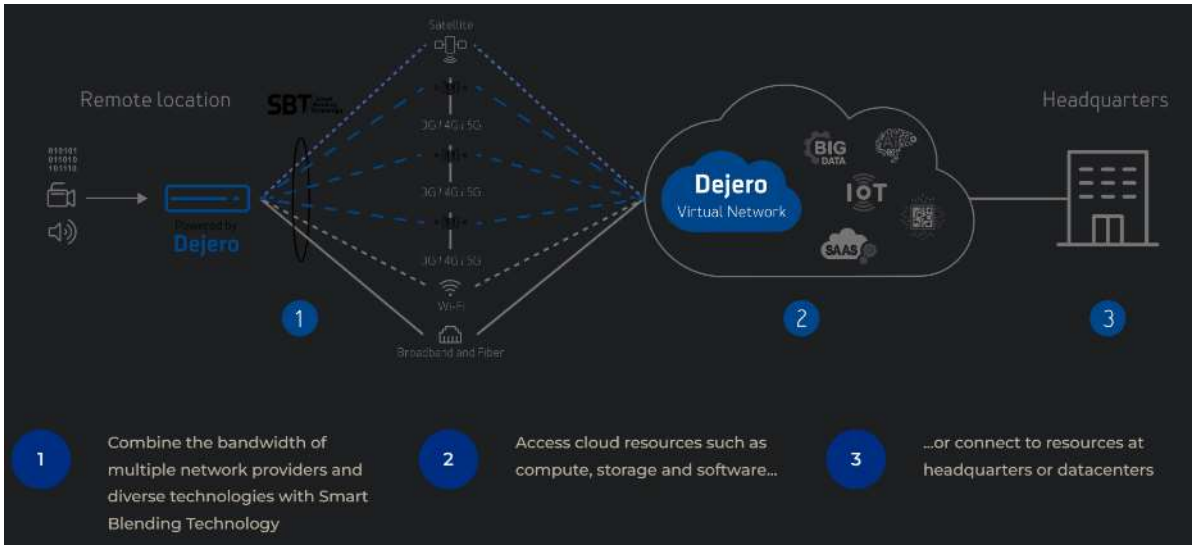
See, e.g., Dejero Smart Blending Technology White Paper located at https://go.dejero.com/hubfs/Resources/Dejero%20Smart%20Blending%20Technology.pdf

Dejero delivers resilient, uninterrupted internet connectivity vital to critical communications and cloud access. It provides connection diversity, redundancy, and continuity by intelligently combining multiple networks into a single managed service.

See, e.g., Dejero Cellular Bonding Technology White Paper located at https://go.dejero.com/hubfs/Resources/Bonded%20Cellular.pdf

118. The SBT system comprises the user equipment configured to receive data from the intermediate server via the plurality of data channels simultaneously. For example, the SBT system comprises the intermediate server transmitting the data received from the portable device to a chosen destination server and/or device, such as a website, file server, and/or other destination server and/or device, receiving any responses from such destination server and/or device, and transmitting the response data to the portable device, wherein the portable device receives the data from the intermediate server via an allocation over each of the selectively enabled RATs in

communication between the portable device and intermediate server:



> Whether accessing cloud services or connecting your mobile workforce and remote locations to your data center or headquarters, Dejero Smart Blending Technology provides enhanced reliability, expanded coverage, and greater bandwidth to organizations.

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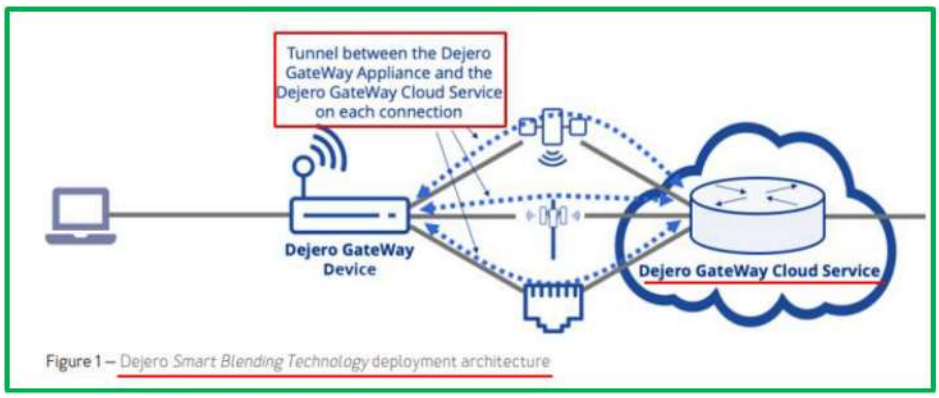

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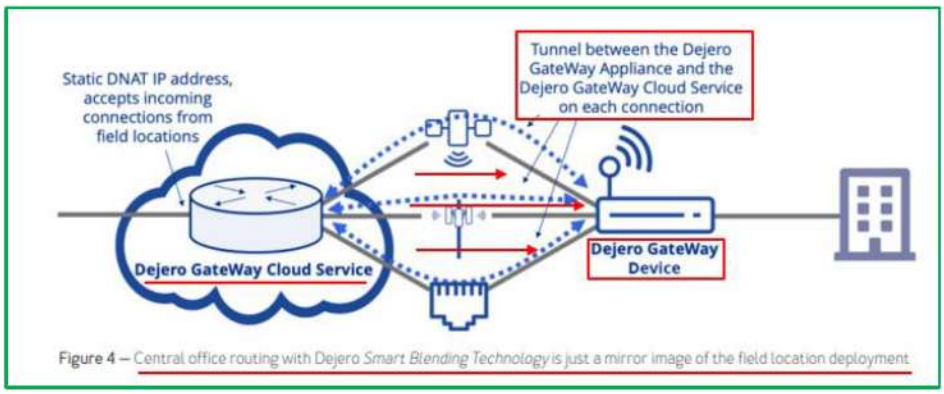


Figure 4 – Central office routing with Dejero *Smart Blending Technology* is just a mirror image of the field location deployment

This feedback loop allows both the GateWay device and the GateWay Cloud Service to operate with fine granularity as they determine the best link over which to send a particular packet.

Unlike traditional solutions, which require complex routing and eBGP configurations, aggregating multiple connections at the central office via Dejero *Smart Blending Technology* is just a mirror of the field implementation: a Dejero GateWay device at the central office opens tunneled connections to the Dejero GateWay Cloud Service over each of the available links (see Figure 4).

Connections are dynamically added to, or removed from, the aggregate pool without needing reconfiguration by an administrator

By statistically filtering these real-time measurements, Smart Blending assesses the performance and reliability of connections; those connections deemed unreliable are put into a state where they transmit redundancy only (for example, forward-error correction, duplicates of packets transmitted on other connections, etc.). While in this state, the real-time measurements continue to be piggybacked on the redundant packets, allowing both the GateWay device and the GateWay Cloud Service to determine when the connection can be reincorporated into the pool of useful connections.

To blend connections in both the transmit and receive directions, Dejero *Smart Blending Technology* doesn't make any assumptions about connection performance asymmetry

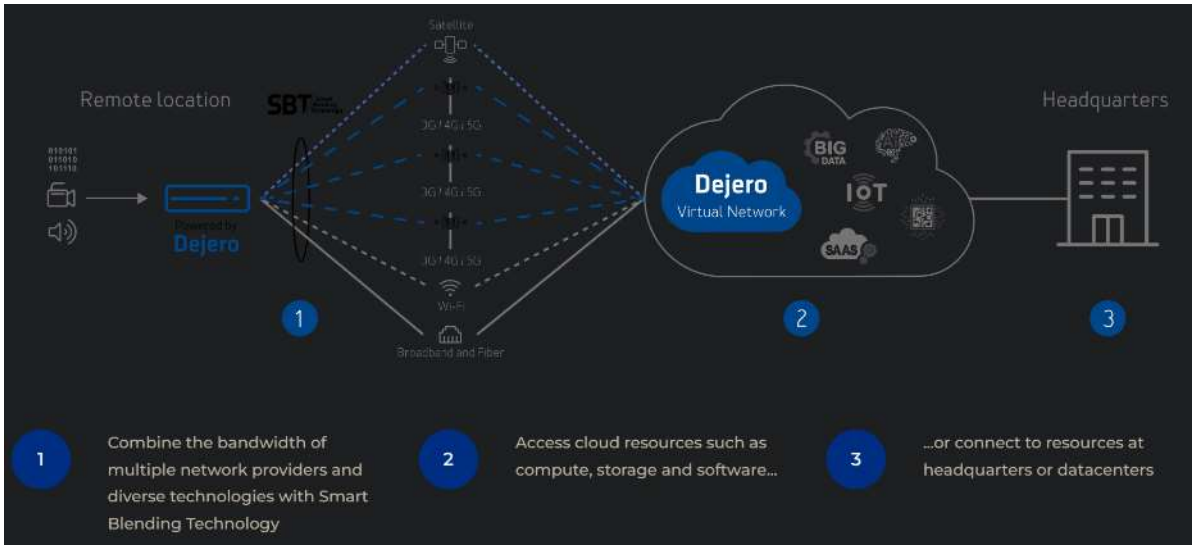
See, e.g., Dejero Smart Blending Technology White Paper located at https://go.dejero.com/hubfs/Resources/Dejero%20Smart%20Blending%20Technology.pdf

Cellular bonding refers to combining two or more cellular connections. The combination provides **more bandwidth** for uploads and downloads. It also provides **connection resiliency** in situations where cellular networks become congested due to high traffic, or in remote areas where cellular signal strength may be diminished.

Greater upload and download bandwidth

See, e.g., Dejero Cellular Bonding Technology White Paper located at https://go.dejero.com/hubfs/Resources/Bonded%20Cellular.pdf

119. The SBT system comprises the user equipment configured to assemble data received from the intermediate server via the plurality of data channels. For example, the SBT system comprises the portable device, upon receipt of the data from the intermediate server, collecting and/or aggregating the received data portions from each of the selectively enabled RATs, and, *inter alia*, assembling the data portions into a full data item for further use and/or processing by the portable device:



Whether accessing cloud services or connecting your mobile workforce and remote locations to your data center or headquarters, Dejero Smart Blending Technology provides enhanced reliability, expanded coverage, and greater bandwidth to organizations.

See, e.g., Dejero Smart Blending Technology page located at https://www.dejero.com/technology/smart-blending-technology

The architecture consists of a remote terminal in the field [Dejero GateWay network aggregation device] linked to an endpoint in the cloud [Dejero GateWay Cloud Service]—very similar to cloud-based SD-WAN

In stark contrast, Dejero *Smart Blending Technology* delivers reliable connectivity anywhere, providing the reliable first- and last-mile connectivity required for cloud computing, online collaboration, the secure exchange of video and data, and other demanding applications.

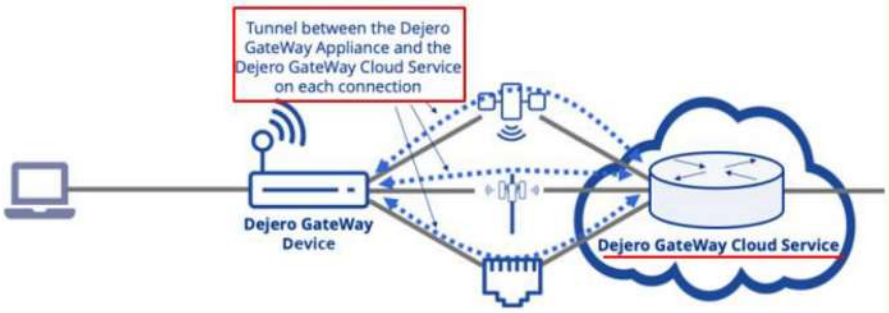


Figure 1 – Dejero *Smart Blending Technology* deployment architecture

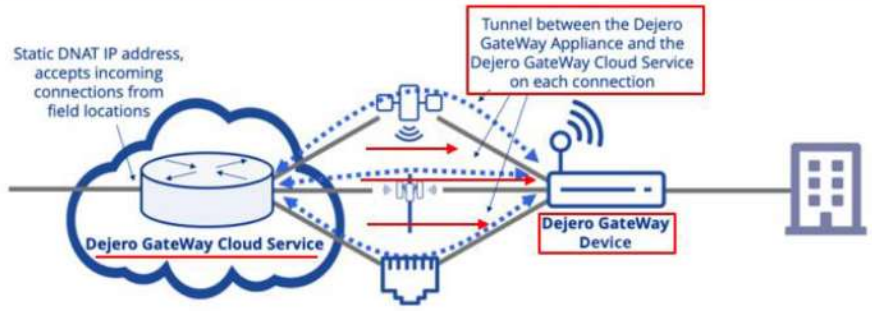
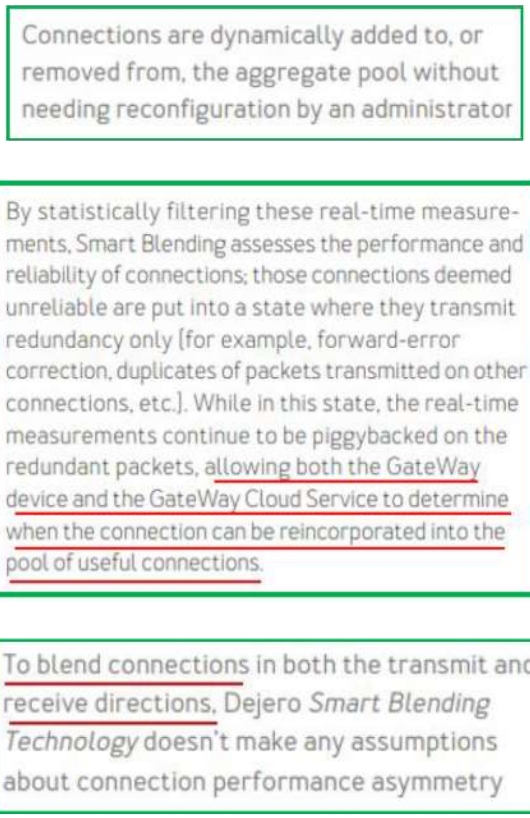


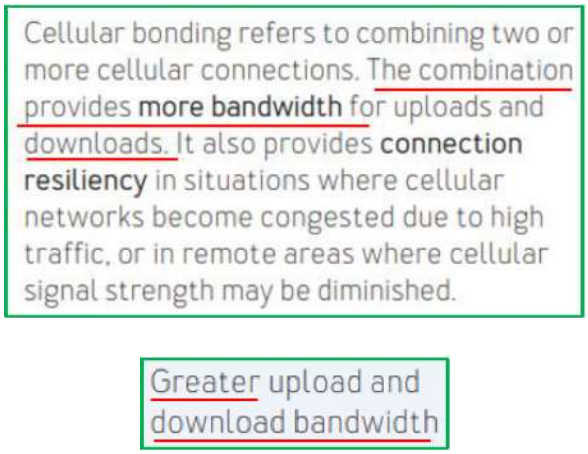
Figure 4 – Central office routing with Dejero *Smart Blending Technology* is just a mirror image of the field location deployment

This feedback loop allows both the GateWay device and the GateWay Cloud Service to operate with fine granularity as they determine the best link over which to send a particular packet.

Unlike traditional solutions, which require complex routing and eBGP configurations, aggregating multiple connections at the central office via Dejero *Smart Blending Technology* is just a mirror of the field implementation: a Dejero GateWay device at the central office opens tunneled connections to the Dejero GateWay Cloud Service over each of the available links (see Figure 4).



See, e.g., Dejero Smart Blending Technology White Paper located at https://go.dejero.com/hubfs/Resources/Dejero%20Smart%20Blending%20Technology.pdf



See, e.g., Dejero Cellular Bonding Technology White Paper located at https://go.dejero.com/hubfs/Resources/Bonded%20Cellular.pdf

120. Defendants have directly infringed, and continue to directly infringe, the claims of the '726 Patent, including at least those noted above, including by making, using, offering for sale, selling, and/or importing the SBT system in violation of 35 U.S.C. § 271(a). Further, including at least to the extent Defendants provide and/or supply hardware and/or software, including software

running on a user's computer and/or other device, the direct infringement by users that occurs in connection with Defendants' applications and/or services occurs under the direction or control of Defendants.

121. Additionally, and/or in the alternative, since receiving notice of the '726 Patent, including, if necessary, from this suit, Defendants have induced, and continue to induce, infringement of the '726 Patent in this Judicial District, and elsewhere, including in violation of 35 U.S.C. § 271(b), by actively inducing direct infringement of the '726 Patent, including by knowingly and actively aiding or abetting infringement by customers and/or users, by and through at least instructing and encouraging the use of the SBT system, service, and software noted herein, including the SBT system. Such aiding and abetting comprises providing software, user devices, servers, and/or instructions regarding the use and/or operation of the SBT system, applications, servers, services, and devices in an infringing manner. Such induced infringement has occurred since Defendants became aware of the '726 Patent, at a minimum, as noted herein, and the knowledge and awareness that such actions by customers and/or users comprise infringement of the '726 Patent.

122. Additionally, and/or in the alternative, since receiving notice of the '726 Patent, including, if necessary, from this suit, Defendants have contributed, and continues to contribute, to infringement of the '726 Patent in this Judicial District, and elsewhere, including in violation of 35 U.S.C. § 271(c), by actions comprising contributing to at least the use of said products, software, and/or services noted herein, including the use of the SBT system by customers and/or other end users. Such contributions necessarily comprise providing software, user devices, servers, and/or instructions regarding the use and/or operation of the SBT system, applications, servers, and devices with the knowledge that such systems are especially made or especially adapted for use in an infringing manner and not a staple article or commodity of commerce suitable for substantial

non-infringing use. Such contributory infringement has occurred since Defendants became aware of the '726 Patent, at a minimum, as noted herein, and the knowledge and awareness that such actions by customers and/or other end users comprise infringement of the '726 Patent.

123. Defendants have had at least constructive notice of the '726 Patent since at least its issuance. Defendants will have been on actual notice of the '726 Patent since, at the latest, the service of this Complaint. By the time of trial, Defendants will have known and intended (since receiving such notice) that their continued actions would actively induce and/or contribute to the infringement of the asserted claims of the '726 Patent, including by customers and/or other end users.

124. The SBT system clearly meets the asserted claim limitations in their normal and expected usage. On information and belief, normal and expected usage of the SBT system by customers and/or end users satisfies the claim limitations for direct infringement. Further, at minimum, the provision of products, systems, and/or functionalities clearly capable of such infringing usage and/or provision of instructions/specifications for such infringing usage constitutes inducement of and/or contributing to directly infringing usage.

125. Further, as noted above, Defendants are being made aware of infringement of the '726 Patent through use of the SBT system at least via the infringement allegations set forth herein. Such direct, induced, and contributory infringement has been and remains clear, unmistakable, and inexcusable. On information and belief, Defendants knew, or should have known, of the clear, unmistakable, and inexcusable direct, induced, and contributory infringing conduct at least since receiving notice of the '726 Patent. Thus, on information and belief, Defendants have, at least since receiving notice of the '726 Patent, specifically intended to directly and/or indirectly infringe, including via direct infringement of customers and/or end users.

126. Watchy believes and contends that, at a minimum, Defendants' knowing and intentional

post-suit continuance of their unjustified, clear, and inexcusable infringement of the '726 Patent since receiving notice of their infringement of the '726 Patent, is necessarily willful, wanton, malicious, in bad-faith, deliberate, conscious and wrongful, and it constitutes egregious conduct worthy of a finding of willful infringement. Accordingly, at least since receiving notice of this suit, Defendants have willfully infringed the '726 Patent.

REMEDY AND DAMAGES

127. Plaintiff hereby refers to, and incorporates by reference, the allegations in the above paragraphs as if set forth fully herein.

128. Defendants' infringement of Plaintiff's rights under the Patent-in-Suit will continue to damage Plaintiff, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court, including under 35 U.S.C. § 283.

129. By way of their infringing activities, Defendants have caused, and continue to cause, Plaintiff to suffer damages, and Plaintiff is entitled to recover from Defendants the damages sustained by Plaintiff as a result of Defendants' wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court, including under 35 U.S.C. § 284.

130. Plaintiff also requests that this Court make a finding that this is an exceptional case entitling Plaintiff to recover its attorneys' fees and costs, including pursuant to 35 U.S.C. § 285.

DEMAND FOR JURY TRIAL

131. Pursuant to Rule 38 of the FEDERAL RULES OF CIVIL PROCEDURE, Plaintiff hereby respectfully requests a trial by jury of any issues so triable by right.

PRAYER FOR RELIEF

WHEREFORE, Watchy hereby respectfully requests that this Court enter judgment in favor of Watchy and against Defendants, and that the Court grant Watchy the following relief:

A. That this Court enter Judgment including an adjudication that one or more claims of the Patent-in-Suit has been directly and/or indirectly infringed by Defendants, including pursuant to 35 U.S.C. § 281;

B. That this Court enter Judgment including a grant of a preliminary and permanent injunction, including pursuant to 35 U.S.C. § 283, enjoining Defendants and all persons, including their officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or participation therewith, from making, using, offering to sell, and/or selling in the United States and/or importing into the United States any apparatuses, methods, systems, and/or computer readable media that directly and/or indirectly infringe any claim of the Patent-in-Suit, and/or any apparatuses, methods, systems, and/or computer readable media that are not more than colorably different;

C. That this Court enter Judgment including an award to Plaintiff of damages, including pursuant to 35 U.S.C. § 284, adequate to compensate Plaintiff for Defendants' past infringement, together with pre-judgment and post-judgment interest, and any continuing and/or future infringement through the date such Judgment is entered, including all applicable, legally allowable, interest, costs, expenses, and an accounting of all infringing acts, including, but not limited to, those acts not presented at trial;

D. That this Court enter Judgment including a declaration that Defendants' post-notice infringement has been, and continues to be, willful, including that Defendants acted to infringe the Patent-in-Suit despite an objectively high likelihood that their actions constituted infringement of a valid patent and, accordingly, award enhanced damages, including treble damages, including pursuant to 35 U.S.C. §§ 284 & 285;

E. That this Court enter Judgment including a declaration that this case is an exceptional

case and award Plaintiff reasonable attorneys' fees and costs, including in pursuant to 35 U.S.C. § 285; and

F. Any and all such other and further relief to which Plaintiff may be shown justly entitled that this Court deems just and proper.

Dated: April 26, 2023

Respectfully submitted,

/s/ John C. Phillips, Jr.

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