

EXHIBIT E-15
INVALIDITY CLAIM CHART FOR THE '426 PATENT
BASED ON U.S. PATENT PUBLICATION NO. 2009/0118017 ("PERLMAN")

U.S. Patent Application Publication No. 2009/0118017 ("Perlman") was filed on December 5, 2007 and was published on May 7, 2009. Perlman is prior art to the '426 patent under at least 35 U.S.C. § 102(b) (pre-AIA). The asserted claims of the '426 patent are anticipated by Perlman expressly and/or inherently or rendered obvious, either alone or in combination with other references, as set forth in the cover pleading for Cisco's Invalidity Contentions and as further explained in the chart below.

This chart is based on Defendants' present understanding of Plaintiff's apparent positions as to the scope of the asserted claims. By including prior art that invalidates the claims of the patent based on Plaintiff's claim construction and infringement positions, Defendants are neither adopting nor acceding in any manner to Plaintiff's claim construction and infringement positions. Furthermore, nothing stated herein shall be treated as an admission or suggestion that Defendants agree with Plaintiff regarding either the scope of any of the asserted claims or the claim constructions Plaintiff advances in its infringement allegations or anywhere else. Nor shall anything in this chart be treated as an admission that any of Defendants' accused technology meets any limitations of the claims.

U.S. Pat. No. 8,649,426	
Claim 1	Disclosure in Perlman
[1.Pre] A method of encoding in real time a video signal that is associated with a videoconference or telepresence session, the method comprising:	E.g., • [0066] (videoconferencing) • [0258] (real-time video streaming) • [0261] (video teleconferencing) • Figure 16, [0241]-[0243] (live video) • Claim 1 (real-time streaming interactive video stream)
[1.A] capturing a stream of video data comprising a series of sequential video frames;	E.g., • Figures 6a-c (I-frames, P-frames) • Figures 7a-b, 8 (image tiles) • [0154]-[0181] ("series of uncompressed video frames" and "series of compressed frames")
[1.B] separating the video frames into a plurality of frame segments, wherein each frame segment represents a part of a complete video frame;	E.g., • Figures 7a-b, 8 (image tiles) • [0168]-[0181] (tiles)

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[1.C.i] encoding each frame segment independently and in parallel to generate parallel encoded data streams, one for each of the plurality of frame segments,	E.g., • [0212] (multi-core and/or multi-processor used to compress tiles in parallel)
[1.C.ii] each encoded data stream containing a sequence of frame segment instances each corresponding to a particular frame segment in the video frames, and each encoded data stream containing I-frame segment instances that carry complete information about a particular frame segment and P-frame segment instances that carry partial information about the particular frame segment, the partial information representing information that has changed relative to a previous frame segment instance in that encoded data stream, and	E.g., • Figures 7a-b, 8, 12 (image tiles) • [0168]-[0181] (I tiles and P tiles)

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[1.C.iii] wherein the encoding of the frame segments for each frame is performed such that when an instance of one of the frame segments within a particular frame is an I-frame segment instance, at least one of the other frame segment instances in that particular frame is a P-frame segment instance, whereby in the respective parallel encoded data streams in any period of time when an I-frame segment instance is present in one of the parallel encoded data streams, a P-frame segment instance is present in at least one of the other parallel encoded data streams;	E.g., • Figures 7a-b, 8, 12 (image tiles) • [0168]-[0181] (I tiles and P tiles) • [0169] ("only one of the tiles in the video frame is an I tile, and the remainder of the tiles are P tiles")

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[1.D] transmitting the parallel encoded data streams independently over a network to a receiver to permit the receiver to decode each frame segment and recombine the decoded frame segments from the different encoded data streams to reproduce an image;	E.g., • [0171] (disclosed technique "significantly mitigates the bandwidth peaks typically associated with I-frames . . . because any given frame is mostly made up of P-frames which are typically smaller than I-frames") • [0173] (disclosed technique "dramatically reduces the [data] peaks")
[1.E] wherein during transmission of I-frame segment instances of one of the frame segments, P-frame segment instances of all other frame segments are transmitted.	E.g., • Figures 7a-b, 8, 12 (image tiles) • [0168]-[0181] (I tiles and P tiles)
Claim 2	Disclosure in Perlman
[2] A method according to claim 1, wherein the frame segments correspond to predetermined parts of the video frames.	E.g., • Figures 7a-b, 8, 12 (image tiles) • [0168]-[0181] (I tiles and P tiles) • [0174] (discussing configuration of tiles)
Claim 3	Disclosure in Perlman
[3] A method according to claim 1, wherein each frame segment corresponds to a different predetermined area of the video frames.	E.g., • Figures 7a-b, 8, 12 (image tiles) • [0168]-[0181] (I tiles and P tiles) • [0174] (discussing configuration of tiles)

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Claim 4	Disclosure in Perlman
[4] A method according to claim 1, wherein the frame segments are uniformly sized geometric shapes.	E.g., • Figures 7a-b, 8, 12 (image tiles) • [0168]-[0181] (I tiles and P tiles) • [0174] (discussing configuration of tiles)
Claim 5	Disclosure in Perlman
[5] A method according to claim 1, wherein at least one of frame segment size and shape is different for one of the frame segments compared to another of the frame segments.	E.g., • [0168] (disclosing that the subdivision of frames into tiles is "not limited to any particular subdivision scheme.") • [0174] ("Note that the tiles need not be square, nor must the video frame be square, or even rectangular. The tiles can be broken up into whatever shape best suits the video stream and the application used.") • [0178] ("As mentioned above, various different sizes and shapes may be employed as 'tiles' while still complying with these underlying principles")
Claim 7	Disclosure in Perlman
[7] A method according to claim 1, wherein the frame segments are determined in dependence upon external application data and indicative of the amount of motion that is expected in different areas of the video frames.	E.g., • [0177] (describing an embodiment where the "low-latency video compression logic 404 . . . controls the allocation of bits to the various tiles in the R frames either by being pre-configured by settings, based on known characteristics of the video sequence to be compressed, or automatically, based upon an ongoing analysis of the image quality in each tile")
Claim 10	Disclosure in Perlman
[10] A method according to claim 1, wherein the frame segments are encoded in encoders having different encoding characteristics.	E.g., • [0177] (describing an embodiment where the "low-latency video compression logic 404 . . . controls the allocation of bits to the various tiles in the R frames either by being pre-configured by settings, based on known characteristics of the video sequence to be compressed, or automatically, based upon an ongoing analysis of the image quality in each

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	tile")
Claim 11	Disclosure in Perlman
[11] A method according to claim 10, wherein at least one of the encoders has a bitrate that is greater than a bitrate of the other encoders.	E.g., • [0178] (describing how the invention "uses smaller tiles to encode areas of the video stream with relatively more scene complexity and/or motion than areas of the video stream with relatively less scene complexity and/or motion")