

ONLINE NEWS AND VIEWS ON VISUAL COLLABORATION AND RICH MEDIA COMMUNICATIONS

October 23, 2007 will go down as a watershed day in the videoconferencing industry. Two big announcements long in the making and likely to bring new meaning to the term “co-opetition.” See our Cisco and Polycom stories below.

*As always, please feel free to forward this newsletter to your colleagues. To be added to our **FREE** automated email distribution list, simply visit www.wainhouse.com/bulletin.*

Andrew W. Davis, andrewwd@wainhouse.com

Polycom Intros HDX Series



One year after announcing high definition videoconferencing support for the MGC bridge, Polycom has introduced its line of HD-capable endpoints, the HDX 9000 Series. Was it worth the wait? Indeed it was. We got a brief demo of the HDX 9004 recently (in a private room at a convention center, not a custom built room) and we were simply blown away by the audio and video quality on two calls: one over the LAN at 2 Mbps and one over the Internet at 1 Mbps (connecting Boston and Austin). We believe that HD systems like the HDX 9000 promise to deliver the audio and video experience that people have long desired with their videoconferencing systems and that HD indeed will spur the overall growth of the market.

While the HDX9000 codec engine itself is packaged in a “very plain vanilla” housing intended to be hidden from the user’s view, the other elements of the system have been cleverly designed by Polycom to be eye-catching, sexy, and functional at the same time. Anybody would be proud to have this system in his or her conference room.

The hand held remote has an interesting, user-friendly shape, one line LCD display, and sexy lights, but we did not have a chance to personally run the device through its paces. Polycom’s user interface in the past however, has been second-to-none in terms of intuitiveness and ease of use. One new feature of the remote is a power on-off button for the codec. The HDX UI also provides audio feedback for many actions, a user-friendly innovation introduced on earlier systems. Menus are translucent over the video.

The codec performance claims are outstanding: The HDX platform delivers



720p now and is equipped to deliver 1080p video resolution in future releases. The system supports HD in both 16:9 and 4:3 aspect ratios without image distortion, enabling customers to use existing 4:3 HD-capable monitors. The HDX systems deliver 4CIF (704 x 576) video resolution starting at 256 kbps, providing much-improved video even at low data rates.

Polycom has paid particular attention here to the design of the data collaboration functions known as People & Content. The PC connection is a simple VGA cable – no more Visual Concert. The HDX series supports dynamic bandwidth management and high resolution content, making spreadsheets and PowerPoints easy to read.

The Polycom announcement covers three different endpoints with a common form factor. Polycom is positioning these products under their new UltimateHD branding that includes HD infrastructure, HD services (see below), HD voice, HD video, and HD content capabilities.



The back end of the codec box sports an impressive array of numerous I/O connections for a multitude of audio and video I/P streams – too numerous to go into here. Integrators can choose to use microphones and cameras from Polycom or others as needed.

The HDX 9000 series consists of three models compared in the table below. The 9001 reportedly can be upgraded in the field to HD capabilities by adding a hardware daughter board.



The HDX series, also available as an Executive system with dual 50 inch plasmas, will be delivered in Q4-2006, including the camera. Polycom is already shipping the HD-capable MGC video bridge and RSS 2000 streaming server and is pre-announcing the HDX executive desktop solution, but details on this are missing (see photo).

The all-new EagleEye HD camera supports 1280 x 720 with 720p up to 60 fields per second and features a 12x optical zoom. Polycom claims the EagleEye is smoother, faster, and quieter than previous cameras while featuring very low distortion over its 270 degree coverage. Analog (YPrPb) outputs are supported for long cable runs

as well as digital outputs.

The digital microphone array supports the new 22 kHz Siren22 audio algorithm. The device, which also eliminates a GSM cell phone interference, consists of three-element mics and can be daisy chained to four devices for maximum room coverage. The HDX also supports stereo.

At the annual Polycom User Group (PUG) meeting

	HDX 9004	HDX 9002	HDX 9001
Max Resolution	HD 720p	HD 720p	SD (4CIF/SIF)
Max Bandwidth	6 Mbps	4 Mbps	4 Mbps
Video inputs	5 HD	4 HD	4 SD
Video outputs	4	3	3
Audio	Siren22	Siren22	Siren22
Multipoint Option(s)	8-way 4CIF; 4-way 4CIF	4-way 4CIF	4-way 4CIF
Full Transcoding	Yes	Yes	Yes
Rack Mount Design	Yes	Yes	Yes
HD H.264 Content	Yes	Yes	SD
Price without Camera	\$19,999	\$15,999	\$13,999
EagleEye HD Camera	\$4,999	\$4,999	\$4,999

Polycom made several other announcements in addition to the HDX series, including a new ceiling microphone, a new Power-Cam presenter module, and MGC software release 8.0 in addition to an expanded services offering and a revised CVE program.



The Polycom VSX and HDX ceiling microphone array is a totally new design that features a 2” globe with three internal mics that hangs down by a variable

length cable connected to an electronics box above the ceiling tile. Separate systems are available for VSX and HDX codecs, each with an MSRP of \$1,199.



PowerCam Presenter (\$7,995 MSRP in North America) is an all-new product that allows presenters to be dynamic and natural in an educational or presentation environment. The system uses ultrasound technology to track the presenter wearing a locator device. Different video views are configurable via a dedicated remote control while auto-zoom keeps framing as configured by the presenter. The system works with any video-conferencing codec.

Polycom's new High Definition Readiness Services (HDRS) shows just how serious the company is taking the transition to HD. HDRS (\$4,995) is a complete infrastructure (read network) assessment service designed to insure that HD videoconferencing systems will have the support structure needed to deliver the goods. Polycom will assign a project manager to work with each individual customer to gain an understanding of his calling needs and LAN topology. The service typically requires Polycom to have remote access to the customer's LAN for one day of testing, although in security-sensitive situations, other arrangements (on-site) can be made (\$9,995). Using the remote approach, Polycom will run tests for 30-60 minutes and then provide the customer with a report detailing bandwidth, call quality, packet loss, noise, jitter, delay, etc. HDRS, which is not limited to Polycom hardware product support, should eliminate post-installation surprises.

Here's What I Think

After experiencing high definition videoconferencing for the past six months, I am convinced it is a significant advance for the industry and that it will drive the market for the next few years. With HD, the audio and video quality are finally at the level that people have always wanted for their videoconferences. My brief encounter with the HDX system served only to reinforce this opinion. HD will usher in the end of "meeting fatigue." While objections are still raised over the need for 1-4 Mbps of bandwidth, this issue will surely evaporate over time, at least in most metropolitan areas where bandwidth is readily available and certainly affordable.

I think the vendors' messages about "rich detail and extended fidelity that will improve productivity and efficiency on a scale never before available" are rather off-base. It's hard to fathom that HD is more productive than SD; HD provides a totally different experience, one which is much closer to the in-person experience. Therefore HD is more acceptable than SD. And yes, there are going to be some applications where the enhanced detail is a unique enabling capability, but truth be told, these are rare. (That's why we have zoom lenses!).

Polycom's HD story is impressive on two counts. One is the HD portfolio that includes endpoints, streaming, bridging, services, etc. The second is the outright performance of the HDX 9000 endpoint itself. As I sat in a demo looking at two 50 inch plasmas and a set of external speakers with ZERO room integration, the audio (superwideband) and video (lifesize, crystal-clear images) experience was simply outstanding. I wondered if this wasn't 95% as effective as telepresence for 20% of the price.

➔ [WR Forum: Please Welcome Polycom HDX Line](#)

The Wainhouse Research Bulletin would like you to join us in thanking our 2006 sponsors who help keep distribution of the WRB free:

Aethra	LifeSize
AGT	MVC
Avistar	RADVISION
Codian	SPL
Compunetix	Sony
Convoq	TANDBERG
DSTMedia	Ubiquity
Huawei	Visual Nexus
inSORS	WebDialogs
Konftel AB	Wire One

The fine print: [Sponsorship](#) of the WR Bulletin in no way implies that our sponsors endorse the opinions expressed in the WRB. Nor does it imply that the Bulletin endorses their products or services. We remain an equal opportunity critic.

Cisco Debuts the Cisco TelePresence Meeting (CTM) Solution

In what will surely go down as a milestone in the history of the videoconferencing industry, Cisco has introduced its first endpoint product. While the CTM solution is certainly a videoconferencing endpoint, calling it such doesn't do Cisco justice.... not by a long shot. CTM is really a new category of product. We hardly know where to begin; so we start with the top five bullet point highlights.

- CTM is being introduced as a product line of two endpoints the Cisco TelePresence 1000 (\$79,000 MSRP) which accommodates two people per system and Cisco TelePresence 3000 (\$299,000 MSRP) that accommodates six people per system. Available in December. No monthly operating fee is required
- CTM is based on all-Cisco technology. Starting with pure sand and a clean programming slate, Cisco engineers spent two years designing semiconductors, sensors, displays, optics, lights and furniture (virtual tables) as well as software and color schemes to optimized the telepresence experience. Chalk up 25 patents pending in the process.
- The codecs are all-Cisco and all-proprietary, and all-out high performance using parallel processing for a low-delay (150ms or better) design. The video is 1080p, something we have never seen before and is based on proprietary compression for low latency. This is about twice the resolution of 720p high definition. The cameras and lenses are Cisco-designed, as are the 65 inch plasma displays. The audio is four-channel wideband, spatial, and low latency. Specially designed microphones eliminate sound interference. CTM is point-to-point right now, with HD video switching promised for 2007.



TelePresence System 3000. The data collaboration screen is below table in front of speaker system. Camera unit on center screen is a few inches down from top level and houses three 1080p cameras. Microphones are table-top and user interface is IP phone.

- The UI is simplicity itself. These systems are basically very high end IP telephones. Setting up meetings is as easy as creating a calendar invitation via integration with enterprise groupware like Microsoft Outlook and Cisco Unified CallManager 5.1. Users can then launch a telepresence call with the touch of a button on a Cisco IP Phone or dial any other Cisco

TelePresence room directly, just like a regular phone call. We believe the only user setting is actually for volume.

- The Cisco TelePresence Advanced Technology Provider (ATP) Program currently includes 24 partners from around the globe. The program is focused on helping partners provide the expertise, intellectual property and lifecycle services capabilities necessary to deliver the Cisco TelePresence experience. Cisco is also developing a program through which service providers may attain TelePresence network certification. Cisco TelePresence certified service providers work to ensure that businesses get the life-like communications experience they demand. Cisco has issued joint press releases with AT&T and Verizon Business.



System 1000 with single screen and single camera



TelePresence System User Interface

Some Color Commentary

There are multiple paradigm shifts embedded in this announcement – in addition to the obvious shift to super HD 1080p and no-compromise approach to designing for human factors to maximize the experience.

One new concept is the idea of a table segment as the basic unit. A table segment might be thought of as including two chairs, a camera, display, and sound peripherals. The way the system is architected, two people will appear lifesize on the 65” display. And the sound coming from the left will be associated with the video on the left. In a future multipoint implementation, it is the segments that will get switched. So, in a 3-screen room you might be looking at two screens from Denver and one screen from Tokyo if Tokyo was the last person to speak. No Hollywood squares here. And switching should add negligible latency compared to mixing and/or transcoding.

Everything in this product has been optimized for the virtual experience. So do not expect interoperability with anything else, not for the next few years at least. The system can however drop down to 720p if bandwidth requires.

You can see from the photos that the furniture and optics have been designed so that the illusion is that the table continues across the screen – a key component for true telepresence vs. normal high end videoconferencing.

Cisco has installed 20 of these systems internally and is committed to having 110 systems deployed globally, we believe within 9-12 months. The company will SIP its own Champagne while cutting travel by 20% and reducing emissions by 10% over twelve months.

Here's What I Think

The Cisco TelePresence Meeting indeed creates a new category for visual communications solutions. The entire focus is on quality, simplicity, and reliability. Like any engineering

design envelope, when you push in on one end, something pops out at the other. Cisco clearly could not find a lot of components in the market (hardware or software) and so dropped back to design everything from scratch over a multi-year development cycle. The losing parameters here are low-cost and interoperability. The winners however are all those that contribute to a true telepresence experience – a conference in which the illusion is that the remote people on video are indeed in the same room with you.

You have admire someone selling a \$299,000 system where the user interface is a Cisco 7970 IP phone. Simplicity like that is paramount for making these systems comfortable for senior executives and reliable as well. No settings to screw up, no PTZ, no parameters to set everytime you want to make a video call.

As far as price is concerned, several interesting issues come up. We believe Cisco has shown previews to well over 250 prospects / customers and the response has been overwhelmingly positive. Even assuming a 40% discount between MSRP and street price, it's hard to see these systems being mass market. Selling 400 of the

	TelePresence System 3000	TelePresence System 1000
Seats per room	6	2
Room environment	Purpose built	General purpose
# video screens	3	1
# HD cameras, 1080p	3	1
Audio	Spatial wideband 4 Channel AAC-LD	Wideband AAC-LD
Bandwidth required	5-15 Mbps	1-5 Mbps
MSRP	\$299,000	\$79,000

System 3000 and 800 of the System 1000 devices per year, together with network upgrades doesn't seem likely to add more than \$500 million to Cisco's top line.

Customers will probably need to add about \$40-75K first year costs for network and conference room assessments and improvements, installation, and maintenance, and of course, the network.

Cisco has created assessment tools for customer conference facilities and networks and is now well into training the 24 selected channel partners, some of whom may chose to provide on-going managed services as well as one-time professional services. The deep commitment by Cisco and its partner ecosystem is to drive success for the customers. Cisco is also working with some key carriers to provide network services geared towards supporting telepresence.

Given the high profile of Cisco Systems, this telepresence announcement is certain to raise awareness in the universe for visual communications. The company has clearly invested heavily in product, channel, and services development and is now about to begin its marketing campaign. Whether you are a telepresence fan or a telepresence doubter, time to sit back and see how the networking and unified communications giant impacts the fortunes of all of us.

⇒ [WR Forum: The Cisco TelePresence Meeting \(CTM\) Solution](#)

Wainhouse Research Takes Collaboration Summit Worldwide

The WR Summit moves to a worldwide venue for 2007. Mark your calendars now!

- 14-16 February: Sydney, Australia
- 23-25 April: Berlin, Germany
- 5-7 June: San Francisco, CA, USA

Full details are available at wainhouse.com/summit. These conferences and technology showcases will look at the evolving issues in unified conferencing, IP collaboration tools, and audio-video-web solutions. For sponsorship information, please contact Sara Fargo, sfargo@wainhouse.com. If you are interested in speaking, send an email to andrewwd@wainhouse.com. Stay tuned for more details in coming weeks.



Channel Partners: Wainhouse Research Could Use Your Help

Wainhouse Research is conducting its first ever on-line survey of conferencing and collaboration **resellers, integrators, and channel partners in general**. Please help us out by [completing the 22-question channel partner survey](#) and be entered into a random drawing for ten \$50 gift certificates to amazon.com. You'll also get a short report on the results. And even more important, you will earn our undying gratitude.

New Research Note Available

[Aethra X3 Videoconferencing System - Evaluation and Testing](#) is a new research note which details WR's experience testing and evaluating Aethra's X3 Videoconferencing System. The WR testing team conducted 18 video calls between two offices using both the web interface and the on-screen user interfaces of the X3. We were pleasantly surprised with the performance and A/V quality provided by the X3. For those interested in reasonably priced, entry-level videoconferencing systems, this research note is a must-read. This testing was conducted using the MASERGY MPLS network installed in four WR locations. Using this quality of service network allowed the evaluation team to keep network performance issues from impacting quality. For more information, see [WR's Research Note on MASERGY's IP Network Services](#).

Conferencing & Collaboration Event Calendar	
WHEN & WHERE	WHAT & WHO
2006-November 1, Tel Aviv, Israel	Future of Visual Communications
2006-November 8-10, Calgary, Canada	Alberta Online Consortium Symposium
2007-February 14-15-16, Sydney Australia	WR Collaborative Communications Forum – 2007
2007-April 23-24-25, Berlin Germany	WR European Collaborative Communications Forum – 2007
2007-June 5-6-7, San Francisco, CA	WR Collaborative Communications Forum – 2007

Letters to the Editor

No surprise. My editorial comments on Tandberg's Movi announcement (not on Movi itself) last issue drew a response from Tandberg's marketing team.

Dear Andrew: We firmly believe Movi is the first of its kind because it is centrally-deployed, fully standards-compliant, and has custom-integration capabilities. Movi is centrally deployed:

- Ease of use for the administrator. Movi is centrally deployed, managed and updated. The administrator never has to touch the client PC. This also translates into ease of use for the end user: Nothing to install or configure.

Movi is fully standards-compliant:

- Movi is fully standards-compliant for interoperability with other standards-based video.
- Movi is part of a total video conferencing solution. Movi will be managed by TMS, work with group and personal video systems, and, of course, other Movi clients.
- By being fully integrated with a company's existing video investments, the productivity gains experienced in offices and meeting rooms now extends to mobile workers and everyone with a PC in the organization.

Movi can be custom integrated:

- With basic HTML skills, customers can make their own client with their own user interface. The ease of integration was by design, with the logic and control in the client itself.

Jean.Rosauer@tandberusa.com, VP of Corporate and Product Marketing

© 2006 Wainhouse Research 34 Duck Hill, Duxbury, MA 02332 USA Tel +1 617.975.0297
Email to: editor@wainhouse.com PR to: news@wainhouse.com Free subscriptions: www.wainhouse.com