

Polycom Internal Use Only
July, 2006

Competitive Dash Board	Tandberg
Region Affected	All
Product Division	Video
Audience	Management, Sales, Sales Engineers, and Channel

Tandberg Announces

- **TANDBERG Profile Series:** “Deliver High-Definition Videoconferencing to Small, Medium and Large Groups”
- **TANDBERG Edge Series:** “Turn any Workspace with a Flat Screen into an Interactive Situation Room”
- **TANDBERG Centric 1700 MXP:** “HD Videoconferencing at your Desktop”

Announcement Facts

NOTE: information obtained from published TAA data at www.tandbergusa.com and from the Wainhouse Bulletin Vol. 7 #26, July 17, 2006

The Polycom Video BU has ordered codecs and cameras to allow further testing and evaluations ASAP. You will receive an update as soon as our tests are complete. Be aware that the immediate statement from channel sources was that the HD camera and new HD solutions from TAA will NOT be available for a minimum of 6 weeks.

Product 1:

TANDBERG Centric 1700 MXP

- Design Features
 - All-in-one executive control center designed for offices
 - Compact HD Camera
 - Integrated 20" widescreen LCD
 - Powerful presentation, multimedia and conferencing capabilities
 - Easily switches between a video call and an XGA PC display
- Application Features
 - Join up to 4 video sites and 3 audio sites with embedded MultiSite
 - Best possible call for each MultiSite participant with rate matching and transcoding
 - Powerful live presentations through one-step PC plug-in
 - View presentations and presenter simultaneously
 - TANDBERG Expressway™ Technology
 - URI Dialing
- Performance Features
 - Up to 2 Mbps H.323/2 Mbps SIP/2.3 Mbps total Multisite
 - Highest level of embedded encryption as well as H.235 and IEEE 802.1x authentication
 - True CD-quality audio
 - Protection against network interruptions in point-to-point and multipoint calls with automatic Downspeeding and IPLR
 - Superior video quality incorporating the H.264 standard



Product 2:
TANDBERG Edge 95/85/75 MXP

- Edge 95 MXP
 - (optional) H.320 up to 512 kbps
 - H.323 & SIP up to 2 Mbps
- Edge 85 MXP
 - (optional) H.320 up to 384 kbps
 - H.323 & SIP up to 1.1 Mbps
- Edge 75 MXP
 - (optional) H.320 up to 128 kbps
 - H.323 & SIP up to 768 kbps
- Design Features
 - Designed for medium to small meeting rooms
 - Transforms a flat panel display into a high definition, interactive meeting space
 - TANDBERG PrecisionHD Camera
- Application Features
 - Join up to 4 video sites and 3 audio sites with optional embedded MultiSite functionality
 - Rate matching and transcoding
 - Powerful live presentations through one-step PC plug-in or LAN connection
 - View presentations and presenter simultaneously with DuoVideo and H.239 Dual Stream
 - TANDBERG Expressway™ Technology
 - URI Dialing



Product 3:
Profile Series

- All existing Profile Series systems now include the PrecisionHD Camera.

TAA Announcement	Facts/Polycom Position
<p>PrecisionHD Camera</p>	<ul style="list-style-type: none"> • Proprietary Connectivity <ul style="list-style-type: none"> ○ Proprietary connection: uses LVDS (TAA specifies use of proprietary cables exclusively) with proprietary signaling. ○ LVDS limited to 40ft cable runs ○ Connection: keyed RJ45 connector • New HD camera limits camera flexibility on codecs. As quoted from Tandberg release notes: “When the HD Precision camera is used over the high speed data bus, the ‘Main Cam’ S-Video input is disabled.” • CMOS sensor technology has sure limitations <ul style="list-style-type: none"> ○ Low light performance will suffer ○ Low Quality performance in comparison to CCD sensors • 7x zoom is a bit limiting for HD camera (VSX has 10x zoom and we expect HD cameras to be even higher performing) • Camera only 30fps – (existing VSX cameras capture at 60fps which enables superior motion handling – this camera will not) • An HDMI port exists on camera– but cannot be used with current codecs and cannot support long connections • Camera not shipping until end of Q3 2006 • List price: \$6,300 USD • Bottom line: this camera may be HD, but it is very limited in connectivity options and overall performance. It will severely under-perform in many of the highest quality applications that

	demand HD today (e.g., distance learning, board rooms, tele-health)
Profile Series	<ul style="list-style-type: none"> • Note: There is NOTHING new here other than an under-performing HD camera. • No incremental processing or horsepower have been added to the MXP codecs to drive the increased requirements for compute and processing. • Despite the massive marketing and PR effort, TAA is still NOT able to support business quality HD. • Based on limited existing processing capability, we strongly believe that these MXP codecs will never support 30fps encode/decode HD functionality. This applies to EVERY solution they are currently selling as 'HD'. • At best, their codecs only deliver 15fps at 720p. • For all the past FUD about being standard based, it is interesting that TAA has chosen to only support a proprietary HD camera with proprietary signaling and cable requirements. • High latency and low frame rates were two of the most critical factors why early adopters of video conferencing were disappointed years ago. These 'new' HD solutions from TAA deliver more of the same and will leave more people disappointed that nothing has changed in X years... • Adding content sharing to any attempted HD call will cut the bandwidth for HD video even further. This will only add to the problem of low frame rates and poor video quality. • Basically, there are no new solutions being offered. Now you can add a proprietary Tandberg HD camera (see above) to the existing Profile solutions. • Profile Series are typically high dollar items, yet they only support one limited, proprietary HD camera. • Also not shipping until late Q3 2006
Edge 95/85/75 MXP	<ul style="list-style-type: none"> • Note: There is NOTHING new here other than an under-performing HD camera. • ALL of these solutions are nothing more than the current 3000 MXP turned on its end. • No incremental processing or horsepower have been added to the MXP codecs to drive the increased requirements for compute and processing. • Despite the massive marketing and PR effort, TAA is still NOT able to support business quality HD. • Based on limited existing processing capability, we strongly believe that these MXP codecs will never support 30fps encode/decode HD functionality. This applies to EVERY solution they are currently selling as 'HD'. • At best, their codecs only deliver 15fps at 720p, and some will never even do that. • The stated industry bandwidth for HD video conferencing is 1Mbps or higher (this does not include content sharing). TAA is trying to pass off 'optimal bandwidth' as an HD solution – even for codecs that do NOT support high enough bandwidth for business quality HD calls. • 'Optimal Bandwidth' is another non-standard solution from TAA that is designed to mask the fact that they are not capable of making HD calls in business quality. • These 'new' Edge systems are really not new at all (3000 MXP), and they will struggle to perform based on low bandwidth capacity: <ul style="list-style-type: none"> ○ Edge 75 – max b/w is 768Kbps (cannot do HD) ○ Edge 85 – max b/w is 1.1Mbps (cannot do HD + HD)

	<p>Content)</p> <ul style="list-style-type: none"> o Edge 95 – max b/w is 2Mbps (cannot do business quality HD or simultaneous HD and content in business quality) <ul style="list-style-type: none"> • These products will all suffer with low HD video frame rate (below 15fps), and due to lack of processing power, we do not expect this to improve with time. • No new capabilities or function – just 720p at limited frame rates with proprietary HD camera <p><u>Pricing / Packaging (with PrecisionHD camera)</u></p> <ul style="list-style-type: none"> • 75 MXP \$9,900 USD • 85 MXP \$10,900 USD • 95 MXP \$11,900 USD • All options are additional
<p>Centric 1700 MXP</p>	<ul style="list-style-type: none"> • Again, the Centric 1700 MXP appears to be a repackaged 3000MXP codec with even more limited HD camera: • CMOS sensor (see notes above) • NO MPTZ; NO Zoom at all • Pan and Tilt requires end user to physically move the entire unit to change image being captured. • ALL the issues above for codecs and performance apply directly to this solution as well. This will NOT be an exciting solution for an executive who is expecting any high quality HD experience. • 20" LCD display that can also act as PC monitor • Low HD video frame rate of 15fps or below. • No stereo audio • List Price \$7,990 USD

Bottom Line:

Analysis of the ENTIRE MXP platform (from a raw performance perspective) indicates it will likely NEVER be capable of delivering a REAL BUSINESS QUALITY HD EXPERIENCE.

It is estimated that the limited processing and performance will not allow the current MXP platforms to EVER reach full 30fps encode/decode at 720p – never mind achieving this while sharing content in high resolution or reaching higher frame rates or camera resolutions.

TAA customers who REALLY want to enjoy a TRUE HD EXPERIENCE need to be prepared for another forklift upgrade for the MXP line.

Polycom HD Statement:

This announcement from Tandberg is a marketing ploy by them to get into the HD market before they have a true HD solution.

For a true HD experience, the following elements are required:

- HD codec delivering 720p at 30fps
 - o Standards based HD inputs/outputs
 - o Multiple camera inputs for 2+ camera
- HD camera, minimum 30fps
- Support for HD display and peripherals with standard based connectors
- Simultaneous content sharing

Polycom will deliver TRUE HD video solutions in Q4 2006

Polycom is currently delivering the only HD recording/streaming server: the Polycom RSS 2000

Polycom is currently delivering the only scalable, richly-featured HD multipoint conferencing unit: the Polycom MGC

Customers who need more information about Polycom's upcoming HD solution can schedule NDA meetings through Polycom Video Marketing Group. For scheduling HD NDA meetings, contact Ashley Uribe at ashley_uribe@polycom.com.

Polycom VSX systems remain powerful video conferencing solutions that offer excellent audio and video quality with multiple options for sharing data.

Polycom VSX Advantages:

- SoundStation VTX 1000® integrates with VSX systems for dialing video calls – eliminates microphones and wires
- StereoSurround™ separates multiple voices with conversational stereo – as natural as being in the same room
- Siren™ 14 eliminates listening fatigue with the clearest audio in the market – no more “What did they say?”

Most video calls are still being made at 384Kbps and below – and for those calls, the most important aspect of the call is audio – this is where Polycom will win every time.

For customers who are investigating High Definition video conferencing for their high end rooms, a video network that is a combination of Polycom VSX and Polycom's upcoming HD system will serve them best.