TEST REPORT EMBLAZE-VCON HD4000

PDF-Version (optimized for print)

GENERAL

Period of testing
The HD4000 has been employed for a long time in the VCC and was tested in July/August 2007 in turn.

Software version
Emblaze-VCON HD4000 7.1.97 (7.1 SP1)

Device class
The video conference system Emblaze VCON HD4000 is a software-client for the operating system Windows XP Professional. The software runs with a USB-dongle. It is possible to draw a HD4000 FREE 30-Day Trial Version from the internet. It demands the dongle only from the 31. day of use, and it even is still possible to insert the dongle into the USB-port after starting the program. When the conference system HD4000 is used together with the Media eXchange Manager (MXM) by Emblaze-VCON, it is possible to carry out the licensing through this process. No dongle is required in this case. By registering to MXM, concurrently boundless release is effected. (Information: O. Götz, Friedrich-Schiller-University Jena, Germany)

Scope of Delivery
Purchasing and utilizing the software is possible on the internet pages of the producer Emblaze-VCON, provided the USB-dongle is already existent. Apart from that, a CD with the software and the USB-dongle is available.

Bandwidth
The video conference system facilitates IP-based video conferences with a maximum speed of 4 Mbps.
INSTALLATION

The minimal requirements for the hardware start at the level of a Pentium IV PC from 3.06 GHz processor pulsing on. For using H.264, a hyperthread-able CPU and a frontside bus with 800 MHz and a RAM-environment with at least 512 MB and 400 Hz are necessary. VCON also recommends ATI All-in-Wonder 9800 Pro/SE or ATI All-in-Wonder 9600 XP/Pro concerning graphic boards as well as the Creative SoundBlaster Live 5.1 (PCI card) regarding sound cards.

The device which was to be tested is equipped with a Pentium 4 3.2 Gzh, 1GB RAM, a graphic board, namely ATI All-in-Wonder 9800 Series and the sound card SoundBlaster Live 5.1.

By reason of backward recommendation, the Creative SoundBlaster Live 24 Bit was also employed externally. However, this did not give satisfactory audio quality.

The camera Sony EVI-D100, the VCON microphone model PHM 6513 II and a LG-TFT-TV screen with a picture resolution of 1280x768@16:67:10 = 15:9 are connected unidirectionally.

The installation of upgrades and service packs proceeds unstained. The manual deinstallation of previous versions is not required.

TEST

Operation

It is highly recommended to select German for the operator interface (through Settings/General Program Settings/Settings/Options/General/Select Language) and choose Show Tool Tips as soon as the setup was proceeded and the software was started for the first time. In the dialogue [settings/general program settings/settings/options/directory], the default check for registering to the online-directory (=IL-server) should be removed. Reasons are provided inter alia in our configuration guidance for vPoint HD. The program interface can be varied by choosing one of four display-modi (Main View, Full Screen, Dashboard, PC-View). In other respects, the program is self-explanatory regarding the handling.

Audio/Video

The tests ran with good to very good audio- and video quality with the disposable gear in the VCC. Certain cut-backs were stated by cooperating with the system TANDBERG 990 MXP. Although the audiocoderc AAC-LD was active during the interaction, the sound of the TANDBERG-system was perceived as interrupted/snatchy, and on the side of the HD4000, the sound seemed airless. The quality of the video conferences with this exclusively software-based VC-client depends more on the underlying PC-hardware and the general settings of the operating system than other VC-gadgets. Especially in the audio ambit, changes of other programs might affect the HD4000-system immediately, too.

H.264

The software-client Emblaze-VCON HD4000 version 7.1 can send and receive the audio format H.264 up to a bandwidth of 4 Mbps. This could successfully be checked during the test, provided the remote station implemented the codec and is able to work up the bandwidth.

H.239
The transfer of data according to the standard H.239 is called Dual Stream with the Emblaze-VCON. The possibilities of presenting data vary more now. It is possible to show any data which was selected on the own PC with the appropriate application. Later on, it was started automatically as well as shown on the remote station. Another alternative is the opening of any Windows-interface and its presentation to the remote station. Every change in this selected window (e.g. opening a new file) is also being transmitted. For the special case of transmitting contents from the internet, a function-button "internet" is provided. In this case, the standard browser is started on the HD4000-PC. The addressed internet pages can be seen by all video conference participants as well. For evaluating the H.239 transmission, a PowerPoint-presentation with various testing slides was used. It is recommended to select the full screen mode (F5) for the PowerPoint-presentation and subsequently to select the PowerPoint-window in the HD4000 system. It is absolutely obvious that the HD4000 system as a receiving station presents font sizes from 8 pixels on well readably when it is used in full screen mode. Graphics are also presented in adequately acrid quality. The remote stations also provided a good readability of text from 8 pixels on. The quality of presented graphics was perceived continuously as acrid with the remote stations.

Remote Control
The remote control always operated well in both directions, provided the required preconditions were set.

MCU
During the tests with the Codian MCU 4500, audio- and video quality were quoted as very well. At sending a H.239 data stream, the motion picture was presented very long delayed. By using the RADVision viaIP 400, very good audio qualities were achieved. However, the video quality was to be regarded as moderate, as the video was quite fuzzy and presented blurred during speedy movements. This is to be ascribed to the poor CIF-resolution. The conference type 909 proved to be flawed. During the dial-out selection of the HD4000 system, the conference picture was only visible to the participants after 25 sec. of activating the conference call. Dial-out calls which were activated by the HD4000 system were rejected by the remote stations.

Gatekeeper
The cooperation with the gatekeepers GNU-GK 2.0.7 and CISCO MC worked without any deduction.

CONCLUSIONS
The system Emblaze-VCON HD4000 is a software-based VC-system which is recommended to workstations (1-3 people) which are equipped with a PC or TV-screen for video- or audio conferences with H.239 functionality. In case the PC is connected to a beamer, the system could also be applied for the use of medium size or larger groups. Especially the main view modus is qualified for displays in the format 16:9. A powerful PC is a necessary precondition if the entire range of functions is to be benefitted from.

TECHNICAL DATA
Producer: Emblaze-VCON
Distributor: MEYTEC GmbH Informationssysteme

<table>
<thead>
<tr>
<th>Supported Standards</th>
<th>H.323, H.239</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound Coding</td>
<td>G.711, G.722, G.722.1, G.723.1, G.728, G.729, AMR(3G), ACC-LD</td>
</tr>
<tr>
<td>Video Compression</td>
<td>H.261, H.263, H.263++, H.264 (up to 4 Mbps)</td>
</tr>
<tr>
<td>Video format</td>
<td>CIF, SIF, QCIF, QVGA, HDTV 720p(1280x720; incoming only)</td>
</tr>
</tbody>
</table>
Thanks to Emblaze-VCON and MEYTEC for supporting the test.