



**MODEX**

# Complex Conferencing at the Hungarian Parliament

## Case Study

Lightware Visual Engineering

Market	Country
Entertainment	Hungary

## Lightware Equipment Used in Project

Lightware Modex optical extenders and DVI optical extenders

The Hungarian Parliament Building, or Országház (which translates as House of the Nation), as it is known, is home to several landmarks. It is the largest building in Hungary and is the world's third-largest parliament building, and Europe's second largest (behind The Palace of the Parliament in Romania).

At the end of 2014, the Parliament announced a tender process for the development of a conference and AV system for the Count Albert Apponyi room. It was eventually awarded to integrator Galax (one of four candidates).

"The main difficulty in the project was that the Parliament required complex, custom development in several aspects (voting, meeting management, camera control, etc.), which had to be implemented within a short period of time," said Krisztián Tolvaj, who was responsible for designing the system and managing the project for Galax.



The conference technology is built around the Bosch DCN NG digital system. "To give you an idea of the complexity of the system and the multiplicity of functions, its operation is ensured by 10 Bosch and 10 MVI Engineering software modules," continued Tolvaj. The MVI software can be tailored to user requirements, offering flexible conference management for the Parliament. Michiel Van Ingen, owner of MVI Engineering, was a continuous presence in the project from initial design to the final stage of implementation and constantly adapted the software to the circumstances and individual needs.

The complete system includes three venues – Committee Room, TV Studio, and Secretariat, which are connected to each other via Ethernet and fiber optical network. Meetings are prepared on the client PC of the Secretariat. Administrators can create agendas and voting sessions in each respective meeting, and can use the delegate database



to set the permissions of individual delegates and invited guests, individual and group speech times, and encrypt personal identification cards accordingly. In addition to settings and meeting preparation, reports and audio recordings made of the meetings are also available here for further processing.

In the committee room, delegates may participate in the discussions through units; they can speak, listen to the speakers, be put on the waiting list in case of multiple concurrent speech requests, vote, and choose language channels.

When inserting the chip card into the card reader, the LCD screen will automatically display information about the user in the language set on the participant's chip card.

On the integrated graphic display, other information related to the discussion can also be easily shown, whereas the flat panel loudspeaker provides high speech intelligibility, regardless of the headcount.



The application software installed makes sure the management, control and broadcasting of the meetings meets the highest possible level. The individual software modules perform the following tasks: system configuration, remote meeting preparation, attendance and authorization management, delegate and group database management, touchscreen meeting management, synoptic microphone control, voting management, identification card encoding, voice recording, automatic report generation, camera control and subtitling, showing meeting information on external hall displays.

“For the final outcome to be successful it was crucial how we implemented the automation process and managed the numerous functions. If it wasn't done correctly, it would add complexity and diminish the user experience and, ultimately, the operator would get lost in a sea of available options,” said Tolvaj.

The control interface that was designed ensures there is no need to switch between the windows of individual software modules, as all functions of conference management focus on one point. The core software succeeds because of its ergonomic design; the control application is optimized for standard touchscreen monitor use, so the system can be managed in real time, in an intuitive way.

The meeting is controlled by an operator sitting in the corner of the room, based on the instructions of the chairman, from a 23-in touchscreen. The content and control options on the monitor were edited by Galax to fit the needs of the Committee using the synoptic editing software of MVI Engineering. The operator normally views an overview of the event through which he/she can access the functions most commonly used during the meetings. The specific sub-functions are accessible from here with one touch.

“A separate challenge was to solve the management of speaking and voting. In the committee work in Hungary, if a delegate leaves the meeting room, he/she can pass his/her voting right to another person. The implementation of this also required bespoke programming by Van Ingen, so the operator can perform tasks using a few taps to ensure that its results are automatically displayed on the relevant information screens and, of course, in the report as well,” said Tolvaj. To ensure a high level of interaction between the chairman and the operator, a 50-in LED Display was installed for the chairman, which ensures constant monitoring of the relevant information during the meeting. Throughout the installation, camera management was of the utmost importance, as the video material plays an important role in both the live stream and archiving.

When a chairman or delegate microphone is activated in the DCN NG conference system, the full HD PTZ camera assigned to that position is activated. If there is no active microphone, an overview camera image will be automatically displayed. In the meeting room, four Full HD PTZ cameras were mounted on the sidewalls. The HD-SDI video and RS-422 control signals of the cameras are connected to a Z440 workstation.

In addition to the seamless video connection, the software can overlay the name of the current speaker on top of the camera footage using HD generated text (delegate’s name, title, speech time, etc.) and the logo of the political party. The cameras can be set up and controlled from the remote TV Studio, where one monitor displays the complete, mixed picture with the control options, and the other – the live view of the four cameras.



The technician can intervene at any time during the automatic broadcasting; he/she can reposition prepositions, cut a still image and can bring up the voting results in a graphical/text format on a layer above the camera image. The room location and lighting technology required the use of custom color settings for each preposition. The in-depth settings can be made either from the Committee Room or the remote TV Studio, or any combination of the two (which can be saved in the settings), which the technician can retrieve during the meeting with a touch of a button. Sound in the committee room is recorded separately as well, however, archiving of the complete AV materials and live streaming is performed in the TV Studio. The Extron H.264 processor is able to stream in two different resolutions at the same time and record the meetings in HD quality. The dates of the meetings can be uploaded to the processor using iCalendar so recording and streaming will start automatically.

The recording also contains the metadata, making retrieval quick and accurate. The conference system adds value to every aspect of committee meetings, ensuring greater activity and comfort of the participants. It also provides efficient communication of information to internal staff and the public, with only minimal human resources for the operation needed.