



Proyecto Modernización Sistema A/V para Salón de Congresos ENP(Avila)

Teldrive Telecomunicaciones SL, Destreza 3 D15, Getafe, Madrid <http://teldrive.com>

An Audiovisual integration project for updating and improving AV systems is presented in the Congress Hall of the ENP in Ávila. Lighting, audio, video and control infrastructures have been improved. The ENP uses this space daily and improving this equipment is allowing it to carry out its educational work with much better quality, in addition to adapting to the new needs that arise annually, as it is the headquarters of the Cyberwall Congress (<https://c1b3rwall.policia.es/>), which has been taking place for the last 3 years. Undoubtedly, the beginning of the University Center of the National Police in the same center has also aroused this interest in improvement.

PROJECT

The National Police School of Avila has the annual challenge of training an average of 3000 National Police as well as other state security bodies: Urban Police, Frontex etc. For this educational activity it has an Auditorium for 1000 seats or an area of 1500 m2, a Congress Hall for 150 seats or 400m2 and more than 70 classrooms.



Built in 1985, it had slight improvements since then: CFL lighting, with an adjustable light system of little use, 20% of the bulbs were not operational or had different shades as can be seen in the photo. The image was transmitted to the projector via RGB cable

From the outset, numerous audiovisual deficiencies were identified:

- High-impedance ceiling speakers
- 6000 lumen Video Projector, which made it incompatible to turn on the full stage light when projecting
- Uncontrolled lighting that prevented light and low light from being maintained
- Component Video Signals
- Low air renewal

Progressively and in different stages phases, all of them have been improved,

Audio Enhancements

The high-impedance speakers were removed from the ceiling and the front ones were placed next to the projection screen, it was necessary to uninstall Split air units that prevented these works



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The existence of a walkable air chamber made it possible to hide all the wiring of the new screen that was to be installed. The speaker recesses were the gateway to this camera

Enhanced Video with LED Display

The most ambitious part was to replace the 15 m² (4 x 3.7m) projection screen with a 4k LED screen with a P1.5 resolution with HDR (High Dynamic Range) performance.



Using 10 bits for the color of each pixel required 34 data connection points, 3 times more than an equivalent display with 8 bits of color



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Improves lighting

The CFL spotlights were replaced by RGB+CCT LED downlight, which allows the room to have a lighting system adapted to each moment, being able to:

- Vary 6 zones with white range colors between 3000 and 7000  K
- Individually vary the colour of each LED spotlight

Along with the improvement of the type of spotlight, a new wiring was made that allows the lighting to be controlled from the entrance door centrally

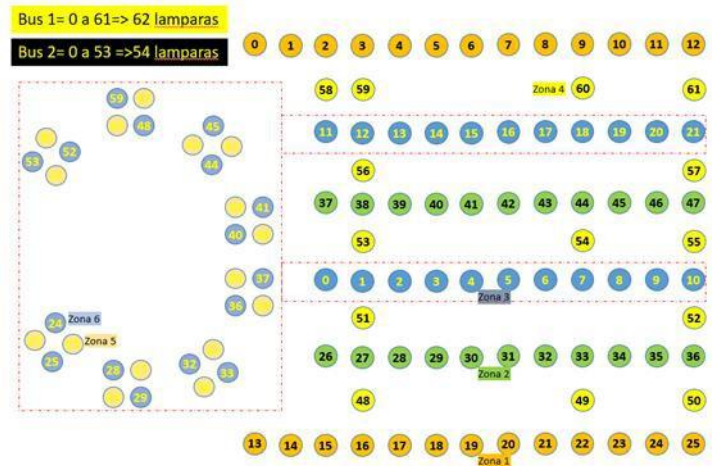
Likewise, 6 zones or groups of bulbs have been differentiated by controlling their ignition by means of a switch

The Dal  system has a limit of 64 lights maximum per bus, to solve the problem because our system has 116 spotlights the control has been divided into two independent buses



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The aesthetic improvement of the new system is not only seen in the light output but also in the spotlight itself, which adjusts to the ceiling and offers a much more elegant appearance.



The Daliv2 Control system, which was developed exclusively for our client as there was no commercial product that allowed this control from a mobile phone, here is a video that summarizes the achievement

https://youtu.be/8jAANOCW4_A

Although the use of RGB possibilities is restricted to very special occasions, adding this functionality to the lighting system offers great flexibility to the system.



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