

New Control Approaches on Lighting

Demers, Louis-Philippe & Jean, Philippe

The control and design of contemporary shows tackle with an enormous complexity: several thousands of channels, multi-media, interactivity, several sophisticated (and dedicated) systems are linked together to assume the control. It is obvious that the realm of the computing solutions we currently have to move towards ubiquitous toolboxes that are integrated.

We promote the use of a workstation for both design and control. The system is not seen as the universal panacea but rather tries to alleviate some omnipresent tedious tasks: endless data transfers/entry from one tool to another, richness of information lost in transferring from one tool (or system) to another, user friendly and full fledged tools promote exploration in the design&control process.

Behaviours, a new lighting control environment and its characteristics:

1) Augmenting the control with the CAD modeling provides new control schemes. First, moving lights can work in a true 3D environment, recorded focus are no longer set by mirror positioning but through stage positions, independent of hang point. Furthermore, the interface becomes more intuitive: channel levels can be modified via Magic sheets, virtual viewers are directly linked to editors and control, short-circuiting tedious system translations.

2) Though a working solution, cue descriptions are still too exhaustive and time consuming. For instance, beam movements have to be defined point by point, even built-in generators provide limited patterns solutions. The system offers curve or pattern editors, very much alike any computer drawing tool, in which, given the CAD data, the focus of the beam can follow the path. Accelerations and decelerations, pen-up, pen-down are put to contribution to generate an animation package for automated luminaires.

3) The user interface brings new working methods. For instance, we present cue list as a flipbook where all the frames can be considered a cue. Each frame can be built from any editor: a magic sheet, a script, a beam path. The flipbook is at the same time a control entity and a documentation of the show since you can visually grasp a whole section of the performance.

4) Object-Oriented: Separating the behaviour from the fixtures moves towards a show independent cue description. For instance, blue wash @ 50 % is a behaviour that can persist from one show to the other, the data base being able to suffice the system with the proper fixtures for blue wash...

5) Networking is also put to contribution. The designers and technical crew can be operating a network of linked workstations: while the ALD updates the show plot, the board operator can be informed and modify the cues, the designer can sketch out a few beam movements and levels and pass it up to the main board, etc.

6) Off-line and on-line are the same system, the control signal and cards being absent in the latter one. This is a strong benefit for the designer/programmer and a direct spin-off of the software based approach.

7) Software based systems. Indication from many real-time related fields show that software solutions are gaining grounds and are becoming true solutions: longer life cycle of the systems, reusability and speed of growth.

8) The system is open and reinforces third-party developers. It is then seen as common platform for new solutions. These new tools can benefit directly from the existing environment and solutions: I/Os, Editors, etc.