



# The Dutch A16 Highway



In view of plans to introduce a high-speed train, the Dutch government decided to renew a major part of the A16 highway between the Galder and Klaverpolder junctions, a distance of 23 km, and to build four major cloverleaf highway junctions. Rijkswaterstaat (RWS) Noord Brabant leads the way in innovative lighting and specified that the lighting installation must be dynamic. Project leader Toine Adams has advised the contractor and HSL/A16 project organization to implement the Philips Starsense Telemangement System.

The growing global awareness of the need to save energy and the fact that light-on-demand increases road safety led RWS Noord Brabant to invest in the Philips Lighting Controls Starsense Telemangement System. The extended lifetime of the lamps and other lighting components, early lamp failure prediction and/or detection and, most importantly, remote access and control functionality were the key features that motivated Rijkswaterstaat Noord Brabant to install the Philips Starsense System along the A16 highway.

## How the system works

The Starsense Telemangement System is based on the LON protocol. This protocol is open and supported by a multiple of component vendors. The system controls the individual light points and obtains a variety of information – voltage, current, power factor, burning hours, etc., about the individual light points for analysis. It

also detects when one of these parameters goes out of range and then stores the information with a timestamp for later analysis. The latest Starsense System incorporates management software, which offers exceptional lighting flexibility and easy configuration in a user-friendly graphical interface and performs a swift analysis of the situation with a map-based interpretation of the installation.

## Project details

The main challenges for this project were the size of the entire installation and the centrally located Traffic Control Center (Geldrop). The Traffic Control Center monitors and controls all individual light points. Road safety is continuously monitored and the lighting level is then adjusted automatically, if necessary, taking into account accidents, traffic density and weather conditions.

A connectivity solution consisting of combined fiber-optics and copper wire (Ethernet/IP) network techniques was used to facilitate this remote connectivity requirement of the RWS. The whole project includes a total of 1500 light points, most of which are SON-T plus 100 W and 150 W lamps equipped with the latest full electronic Philips DynaVision gear, and is approaching completion.

## The future

The Dutch RWS has experienced firsthand the added value of light-on-demand and remote control of light points on a major highway. The RWS also found the fact that no scouting is required to be a very attractive feature and is so convinced of the added value of this LON based system in terms of financial, wellbeing and public safety benefits that other projects at various locations on the Dutch motorway grid are to be equipped with the system as well. Examples include the orbital around Eindhoven and 's-Hertogenbosch'.

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