

Wireless Display System

The need for providing the public with up-to-date information is growing. It is not sufficient to have static or off-line signs. Current solutions often require a cable connection between the center and the signs. Commonly this is not desirable or even possible. By using DARC it is possible to keep a large number of signs updated in real-time without any infrastructure at the signs. Since DARC uses proven FM technology the signs can be placed wherever there is FM reception.

The DARC technology combined with Sectra's range of DARC products is perfect for dynamic information distribution to public signs like LED displays and monitors. The Sectra wireless display system consists of four major parts.

Sectra SPS with MCA

The Service Provider Suite is a set of servers for easy broadcasting of different kinds of data over DARC. It contains ready-to-use solutions for



many common data sources as well at programming interfaces for customer specific solutions. The Management Center Application software (MCA) for generating and formatting the data for the signs, is a part of the Sectra SPS. The MCA decides what information to show on the different signs. The MCA has the following features:

- Creation of advertisement/information presentations
- Powerful scheduling of when to show advertisements/information
- Addressing of displays either in group or individual
- Generation of invoice data

Sectra DARC infrastructure

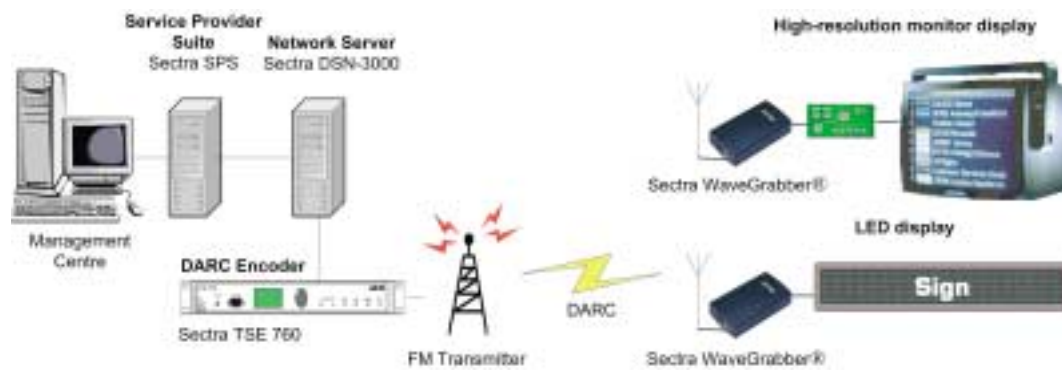
The DARC infrastructure with network server, DARC encoders and FM transmitters. This part handles the physical broadcasting of low-level DARC data over a set of FM transmitters

- Sectra DSN-3000. The DARC Network Server is the heart of the system and the interface for both the Sectra SPS and the DARC encoders. It is responsible for sending the right data to the DARC encoders enabling highly configurable services with respect to geographical coverage and bandwidth usage.
- Sectra TSE 760. The DARC encoder that receives and modulates data from the DARC Network Server and distributes it to the FM transmitter for broadcasting.

Sectra WaveGrabber®

Sectra offers a range of DARC receivers, Sectra WaveGrabber®, well suited for wireless display systems. Sectra WaveGrabber® is available as a card receiver for embedding in existing hardware and as a standalone receiver, that easily can be attached to signs or monitors.

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High-resolution Monitor

High-resolution monitors are commonly used for showing high-resolution still images, slide shows, scrolling banners, tables or combinations thereof – all in full color. The monitor can be anything from a normal television set to special made high-contrast outdoor displays. Since most monitors don't have any local intelligence there is a need for a control unit that receives data from the DARC receiver and generates the video signal that is connected to the monitor.

Monitor system setup:

- The MCA builds the presentation by collecting images and text. Before sending the data to the signs the presentation is packaged using a protocol that the sign's control application can interpret. The MCA connects to the Sectra SPS and sends the data to any set of displays.
- The Sectra SPS compresses the data (and possibly encrypts it) before it is sent to the DARC network.
- The sign's DARC receiver is connected to the sign control computer, a small Windows-based PC mounted at the monitor. The data is interpreted and the original presentation is displayed on the monitor using the control unit's graphic adapter.

LED Displays

LED displays have lower resolution than monitors and are therefore mainly used for showing text and simple bitmap graphics. Depending on the type of display you can also show scrolling text in color. The LED display for this application comes with a serial RS-232 one-way control interface. The MCA builds up the display scheme and loads it into the display.

LED display system setup:

- The MCA creates a transparent wireless serial connection and generates the data for the display.
- The serial output of the MCA is connected to the Sectra SPS that takes care of transmitting the data over DARC.

The DARC receiver recreates the original serial data produced by the MCA and is connected directly to the LED display.

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