

VoW™ - Wise™ Long Line Public Address System (LLPA)

Appreciation Course Documentation

Introduction

This document has been prepared as an overview for the VoW-Wise LLPA system. It outlines the system operation, capabilities, expandability and maintainability.

Other documents cover many of the more detailed operations of the individual software packages. The packages can be run independently of one another and therefore have their own manuals. When used in combination some functionality changes and this is often reflected in a specific manual or joint manual.

- VoW – This Voice over Web application has its own Operator Manual.
- Wise – This Customer Information application has a dedicated Operators Manual.
- Maintenance tasks are included in a single combined VoW-Wise Maintenance Manual. This manual also covers all associated software, devices and the remote outstation computers that make up the system and enable VoW and Wise to communicate with those remote locations.

The LLPA system has three main components.

- The control room operator terminals. These provide the users with a computer software interface that controls and monitors the entire system. They are standard off the shelf computers making them easy to upgrade and service.
- The SCIS (Satellite Customer Information System) computers. These are small but fully functional computers running Windows XP. They act as the local station interface and control the output of all announcements. They also control the amplifier output zones when the LLPA is announcing as well as providing feedback information to the control computers, which includes the current playback status and whether the local microphone is in use. These computers are standard off the shelf systems making them easy to upgrade and service.
- The Network between the control room and the remote station SCIS units can be a network combination of WAN, LAN or Internet connections.

The main program for LLPA use is the VoW contact application. This is a modern looking graphical application specifically designed for its flexibility, versatility and expandability.

VoW is accompanied by Wise, a fully functional Customer Information System. Wise handles the train digital announcements which are based on the train timetable and read directly from the train record calling pattern.

In the background there are a number of independent programs performing essential tasks, these can be added or removed as required to customize the system operation. They include the following:

The Audio over IP controller and ZoneR controller software drivers, that enable fast connectivity with all the remote SCIS computers.

A UPS battery monitor warns the operator of an imminent shutdown and performs a safe shutdown of the computer if the battery life nears critical.

Remote access software allowing engineers or operators to gain access to the PC from a remote location across a LAN network or the Internet. This help an operator to access the

system from a remote location, or an engineer to perform remote diagnostic operators or perform updates.

The VoW Application

VoW can be configured various combinations to provide live announcements, help point assistance, manually implemented pre-recorded announcements and automated scheduled announcements. Each of these announcements can be directed to one or more locations. Output is virtually simultaneous even when all remote locations are addressed at the same time.

VoW can also be configured with the following useful features that are already built in. Many of these features are located on their one screen page known as a tab. They can be accessed from the menu or by clicking on the required tab.

- The Main LLPA tab provides easy selection of each location or zone. It also provides a live status report from each of the remote SCIS computers. Each of the locations has a button that is colour coded to indicate its current state as well as a status phrase like "Ready", "Live" and "In Use".

Live announcements are made using the map LLPA map to select the location at which to announce the message and then activating the microphone switch. One or more location may be selected and the map has a useful drag selection feature to enable multiple locations to be selected in a single mouse move.

- Information tabs are provided to show technical information or can be used for expansion of the system at a later date, such as Help Point control or station layout screens.
- Scheduled Announcements can be configured for individual locations & multiple locations. Each announcement can be configured with a start and end date and time, an interval at which it is to be repeated during those times. Each one can also be quickly activated or de-activated as required.
- Custom user recordings can be produced by the user to suit their needs. These recording can be saved and renamed. They can also be used as scheduled announcements or played independently when required.
- Night time zone restrictions can be applied at any time by the system operator. These can be instantly turned on or off when needed or set for automatic activation using a night time start and end time during which no announcements are to be made.
- System Logs are provided as record of use and operator tasks. All logging can be enabled or turned off by an engineer. Reducing the amount of logging can improve the life expectancy of the hard drive and improve system performance.
- An online reference tab provides access to the online help text, documentation, system data and can also be configured to access remote web sites. Access can be controlled to restrict access to authorised sites only and hence prevent improper use. This tab is also used by engineers for remote interrogation of remote devices.
- A simplified Email service is also built in. This service requires either Internet access or a local network server that can act as a message server.
- Users are also provided with a Notepad editor to save their own notes. And a logging editor to keep their own log files and records. Both editors are identical, but they save their files in different locations to avoid confusion between their different uses.
- Diagnostic tabs to help diagnose system faults.
- Engineering tabs allowing engineers to edit certain non-critical settings.

The Wise Application

Wise is a fully functional Customer Information System. It has been derived from RCIS as CIS application that has been in use at railway stations since the early 1990's. Wise has been specially configured for IP networks and runs on the latest Windows Operating Systems.

When used with an LLPA system Wise handles all train digital recorded announcements based on the real time train timetable. Announcements are based on scripts that read the contents or the train record and its calling pattern. These scripts can be customized and saved for each individual train record or a standard default message can be applied for use when the records have not been individually customized.

The train records are fully editable and train records can be added and removed when required. In addition to the live timetable users can also save their own master timetables for use on future dates. These masters are extracted at 03:00 each morning to form the live timetable for that day.

Wise also has its own custom recording form so that users can record their own train announcements for non-standard occasions, such as festivals and other special events or excursions. These can be incorporated in into the train announcement script to make them a permanent addition or just a temporary one

This CIS package can be used in any of the 5 available modes.

- Manual Mode – Enables the user to take full control of all posting and clearing of train records. In a LLPA environment this mode will probably only be used at times of severe disruption to services.
- Confirm Mode – This is similar to manual mode but has the additional feature of showing the next train available for posting.
- Auto Post – If trains are running in sequence but are mostly running late this mode can be very useful as it automatically posts the next train but does not clear it. Trains are cleared manually by the operator.
- Auto Depart – The most useful of the automatic modes. This mode automatically posts and clears trains in sequence with the timetable and the current time of the computer terminal. No user intervention is required.
- TD Auto – This final mode is ideal for the truly automated system. It requires a TD connection so that live train running data can be used to trigger the clearing of the trains as they leave the station and can update the train records with actual delay information.

The SCIS Remote Computers

These are Micro computers that have a very small size and can be mounted in a metal case with mounting lugs. The unit is ideal where space is limited and can be mounted in racks, fixed to walls or in the back of a display case.

They are fitted with a ZoneR, a proprietary PCI card that has multiple uses. For LLPA systems it is used to:

- Initiate the amplifier zone switching
- Report local microphone in use status
- It can reboot the PC if the PC is frozen or has shutdown.

All remote SCIS computers has inbuilt diagnostic software. This software includes the audio playback and communication programs, EyesAFar to enable remote engineering access and an automated update program that allows the computer to receive updates from the control computer.

Capabilities and Expandability

VoW

The VoW – Wise combination opens up a wide range of possible uses and expansion.

VoW has three Map display tabs these are used to connect to remote devices. Each tab can be used to control an independent LLPA system and/or a Help Point system. Each map tab can control numerous locations / zones, there is no limit to the maximum of zones that it is capable of controlling. This makes the VoW system extremely flexible and expandable.

VoW can be used for many tasks that are not required in the standard LLPA configuration. These include the following features:

- Help Point assistance
- Camera control interface
- Email support
- Independent access to browsers and Office programs
- System Backup and Recovery facilities
- Internet connectivity

Wise

Wise also has a wide range of features that are used in a LLPA context. It is a fully operational CIS package.

In addition to the DRA service provided for the LLPA system Wise is also capable of providing the following features:

- Outputting train data to LED, TFT, CRT & Plasma displays.
- Interrogation of TRUST data feeds.
- Interrogation of Train Descriptor feeds, including display of train movements on maps.
- Plunger control.
- Diagnostic and fault reporting screens.
- Special Notice and Remark editing for output to displays.
- CIF data extraction of timetable changes.

SCIS

The SCIS remote computers are fully function and could be expanded to include screen display controllers. This facility would enable the control of multiple stations from a central location. This is particularly useful where there are unmanned stations.