

Description

Lifeline ACS is a technology that allows all digital audio functions of one or more 500, 505, or 510 Announcement Control Systems® (ACS) to be backed up by a completely separate ACS mainframe. In an effort to avoid loss of paging due to catastrophic failure in any one equipment room, the Lifeline ACS may be located in an area that is separate from the primary systems. Given the proper network connectivity to these rooms, the Lifeline ACS can also back up more than one primary system. In addition, the primary systems can be segmented, so that specific Lifeline ACS's are responsible for backing up only those primary systems to which they are assigned.

With the updated Enterprise software, any configuration changes to an ACS are also automatically sent to the Lifeline ACS. In this manner, the Lifeline ACS is ready to take over operations for a primary ACS without first needing to download any configuration data from the server. All digital audio functions are automatically backed up by the Lifeline ACS (that is, those functions that use IED digital microphone stations and digital power amplifiers). Analog audio functions will not be backed up unless the system integrator makes special provisions for extending analog audio connections from the main ACS to the Lifeline ACS. 500 or 508 Series microphone stations are not backed up as part of the Lifeline ACS.

The time frame for detecting an ACS failure, and performing the switch-over, is configurable. This allows the system integrator to balance between rapid response, and preventing unnecessary switch-overs due to commonly occurring glitches or mainframe reboots. Typically, the system is configured for fail-over after 1 or 2 minutes, which is significantly faster than any human response. Switching back to the original ACS is under user control. This allows the operator to verify that the original mainframe is ready to go back into operation and select a convenient time that best meets the operational requirements of the facility.

Features

There are three software components to the Lifeline ACS system:

- **Lifeline Monitor** – A program residing on the Lifeline ACS that monitors the status of all primary ACS's and determines if fail-over is warranted. It also receives and stores configuration data for the primary ACS's.
- **Lifeline Check** – A program initiated during the boot-up sequence that determines/indicates whether a Lifeline ACS is currently performing paging duties. If this is not the case, then the program allows the normal ACS

startup. If the Lifeline ACS is in service, it then prompts the user to resume primary functions or remain off line. If the user chooses to resume primary functions, then the ACS communicates with the Lifeline ACS to yield control of the system before performing the normal ACS startup.

- **Enterprise Device Configuration Component** – The device configuration component within this suite of software sends copies of all ACS configuration data to the proper Lifeline ACS mainframes.

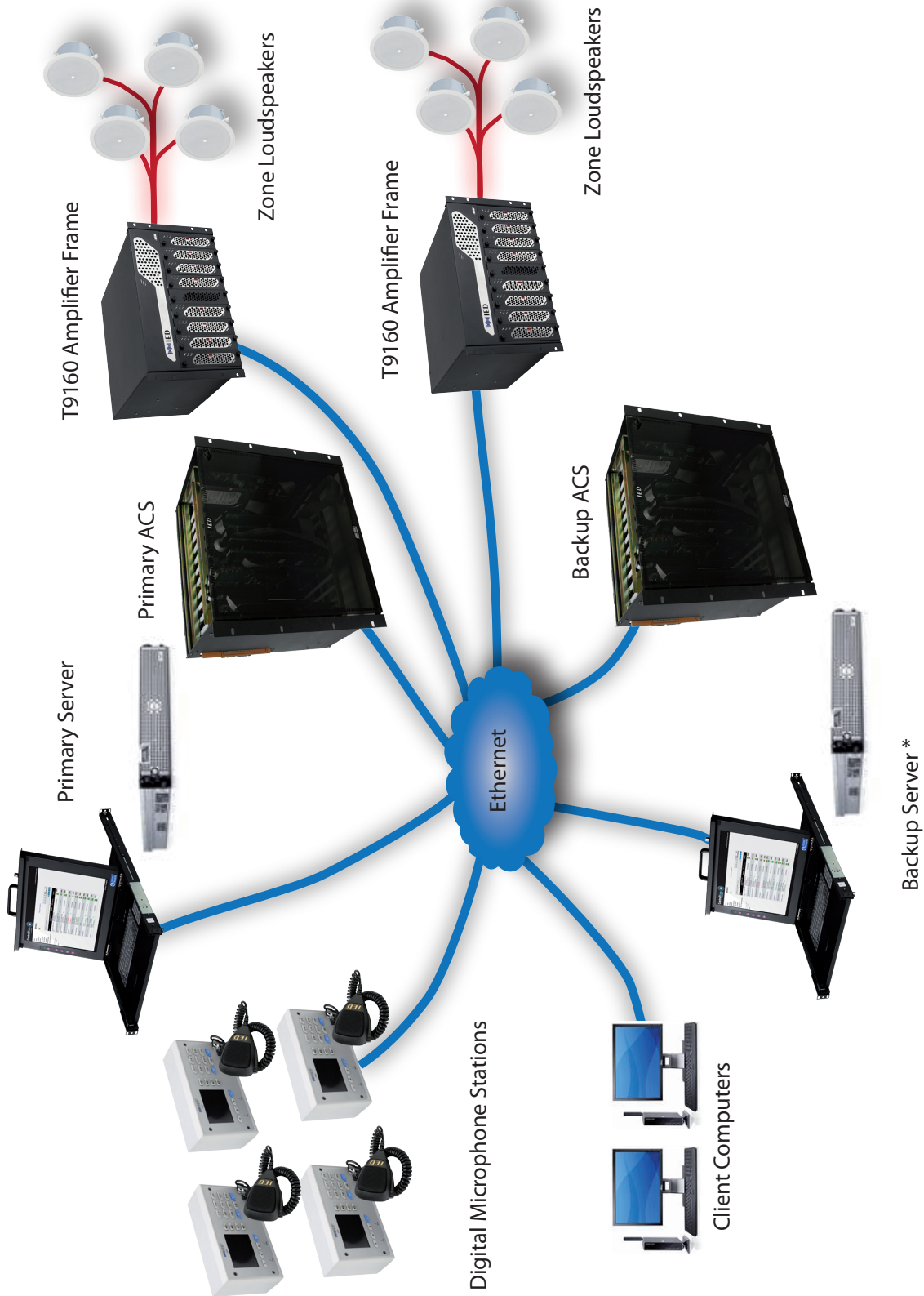
While monitoring the ACS's, the Lifeline Monitor is typically configured to allow for more than one consecutive failure report to account for temporary communication glitches. The number of consecutive failures and the time between status checks is fully programmable in the system. The Lifeline Monitor program communicates with the device configuration software in Enterprise and saves configuration data for all primary ACS's in separate areas of its permanent storage, ready for use should a primary ACS fail. Monitoring the primary ACS's involves monitoring both CPU's (if the ACS mainframe has redundant CPU's.)

When the Lifeline Monitor determines that a primary ACS has failed, it automatically reconfigures the 510N card(s) on the failed ACS (if reachable on the network) to release their audio network channels, so it can re-assign them to its own 510N card(s). At that time, the program activates the normal ACS announcement controller software and takes charge of all digital mic stations and Titan IPAU frames (T9160) assigned to the failed ACS. This backup requires no manual intervention.

System Requirements

A complete, dedicated ACS must be installed to function as the Lifeline ACS. All primary ACS's in the system must utilize 510N cards for audio distribution to Titan IPAU (T9160) frames and multi-ACS paging (if applicable.) Lifeline ACS will require a system update to the current release of IED Enterprise (IED0631) on all systems requiring a tie-in to the redundant ACS. Updates to ACS executable files may be required if adding Lifeline to an existing system installation.

Lifeline ACS



* Backup server software is not a required component of Lifeline ACS. It is available as a separate option where full redundancy of data is required.