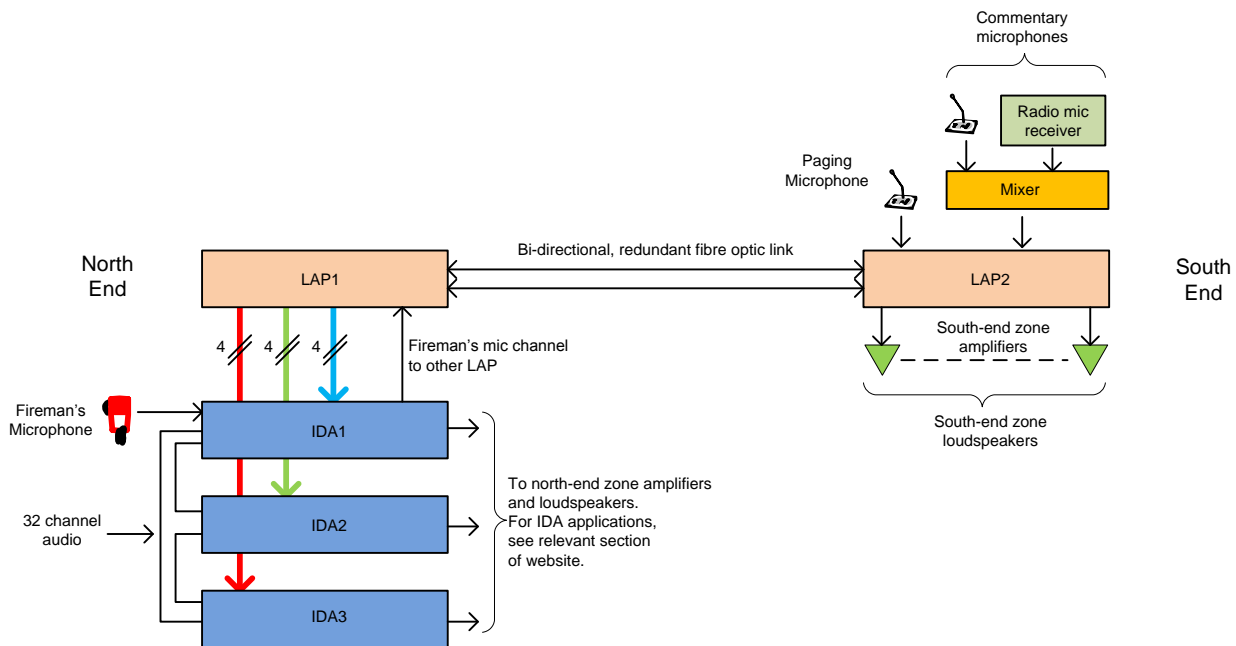


Application Example Linked Audio Processor (LAP)

Introduction

The LAP is a sixteen channel audio matrix and digital signal processor that can networked to create both simple and complex systems. This example shows the LAP used to connect a Public Address system and a Voice Alarm system, located at opposite ends of a sports venue.



System Description

In this example, the existing copper connections between the north and south end equipment rooms had to be removed because of construction works being carried out between the two locations. A method was required to reconnect the systems using an infrastructure that was easy to install. The LAPs are connected by fibre optic cables arranged as a redundant loop so that failure of any single segment does not result in a total loss of connectivity.

Both LAPs are configured as 4 inputs and 12 outputs, which is the best match for the number of sound sources and the number of zones to be served. The south end of the venue has an existing monitored Public Address system. This is a system where the critical signal paths are automatically monitored for fault conditions but the overall system typology does not quite meet the standards for a Voice Alarm system. The south end is also where the administration offices and commentary positions are located, hence the presence of the paging and commentary microphones. The north end of the venue has an existing Voice Alarm system and is where the fireman's microphone is located.

The LAPs are set up by easy-to-use, free software to ensure that the system routes audio to the desired area in response to various control inputs from paging microphones or the fire alarm system. In this way, emergency messages, paging and commentary audio can be routed to any zone within the venue. At the north end, LAP1 outputs are used to feed Public Address messages from LAP2 to the various zone inputs of the IDA controllers. However, the configuration of the Voice Alarm system gives the fireman's microphone on IDA1 priority over all of the Public Address inputs. An IDA1 output feeds the fireman's microphone signal via LAP1 to the south end where the configuration of LAP2 gives it priority over all other local inputs.