Protection switching

LTN M&C

Leverage logic and automation to keep your signals on air and your equipment safe.
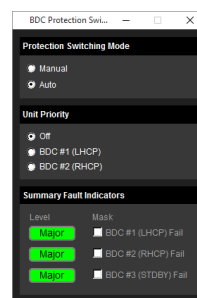
Protection switching

Video/Data infrastructure includes redundant devices and paths to help keep them on air, but relying on operators to manually switch to the backup equipment is frequently slow and unreliable. Even following a well-documented written procedure can take precious minutes. In addition, high-power devices can be subject to damage if sent signals outside their operating parameters. LTN M&C addresses the need for both kinds of protection.
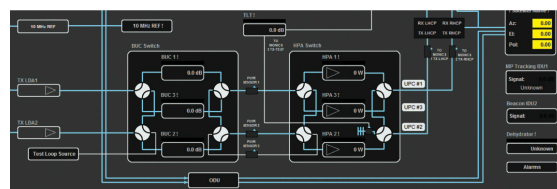
Protection of signal

LTN M&C monitors every device in your video chain. When a device reports a fault or when it is operating outside acceptable ranges, LTN M&C can use routers and switches to put backup devices online within seconds. Easy-to-understand dashboards with path lines and coloration show users the current signal paths and statuses of devices. Operators will be alerted to the failed equipment, and extensive logging records every detail about a failover event.

LTN M&C includes logic designed to:

– Provide manual or automatic protection switching for individual uplink chains based on backup equipment availability and custom logic determined by the customer

– Display standard and custom interfaces for protection switching functions and alarm monitoring

– Remove chains from the switching algorithm for maintenance

– Limit RF carrier interruption to the point that on switch, viewers perceive service continuity

Example: Protection Switching Control Panel.

Example: Protection Switching Dashboard where a backup device covers two chains.

Example: Protection Switching Dashboard where two sources and two sets of equipment are switched out to a single destination.

Protection of metadata

In addition to monitoring the devices in the signal path, metadata can be monitored in a channel as well. SCTE 35/104 and other metadata can be monitored at multiple points in a transmission chain, and if metadata is missing or corrupted LTN M&C can be triggered to switch to alternate equipment or paths.

Service	DNF | Trigger		SCTE-104	SCTE-35 Loopback	SCTE-35 Downlink	Mask	Level	Status
					AdCheck Multi-Point SCTE Monitoring			
NET 1	2017-10-30 12:49:48 Splice Start	X Y	SDI	MAIN BACKUP	MAIN BACKUP	☑	Major	2017-10-30 12:49:52: Success

Protection of equipment

Incorrectly handling a failover, particularly in the satellite market, can result in situations including amplifiers and transponders receiving signals with power levels above their operating range which can result in damage. LTN M&C can execute protection switching scripts which keep levels within safe ranges as well as monitoring equipment in non-failover states for out-of-range levels and initiate switching or shutdowns before expensive components are damaged. Relying on a single component hardware solution may protect a single device, but it does not provide a complete picture of the issue and the flexibility to determine the best solution. Manage switch timing to minimize power perturbation of adjacent transponders on the satellite.