Alert Notification System Router (ANSR)

At A Glance

ANSR is an alert response system that can autonomously page or email mission operators for satellite events or anomalies.

Benefits

- Enables low staffing or lights out operations.
- Additional layer of safety beyond staffed operators.
- Low cost.

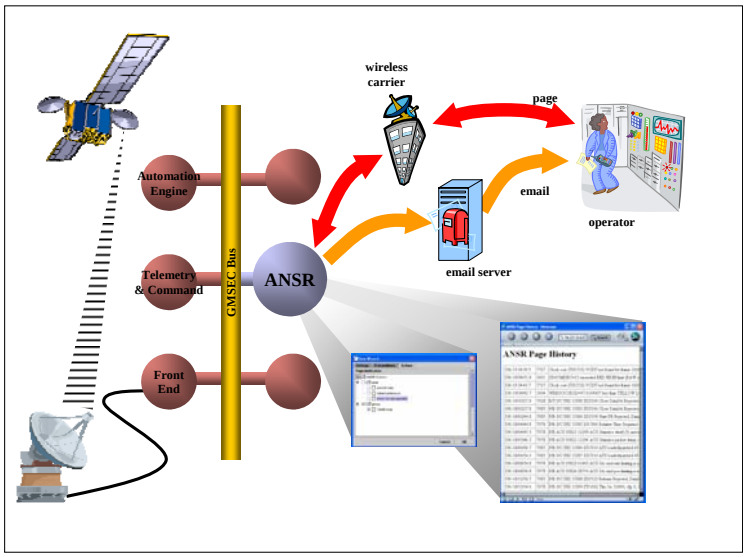
Features

- Tracks acknowledgement of pages
- Supports call trees
- Fully redundant and reliable
- Supports email or paging
- Platform independent
- Works even with operations in closed networks
- GSMEC-Compliant

Summary

ANSR can support lights out satellite operations by autonomously paging satellite operators in the event of some event or anomaly. ANSR gives the operator a predetermined period to acknowledge the page before it considers the operator unreachable and escalates the notification to a contingent. ANSR supports call chains and call trees to allow for multiple contingencies.

ANSR is GMSEC compliant and 100% redundant. In addition to the paging service, ANSR provides a graphical configuration tool, a console-based monitoring tool, and a web-based log viewer.



ANSR information flow

ANSR Components

•Server – receives directives on GMSEC bus and pages or email operators

•Console – runs at MOC; configures ANSR and monitors server

•Web application – makes page logs and attachments available via internet

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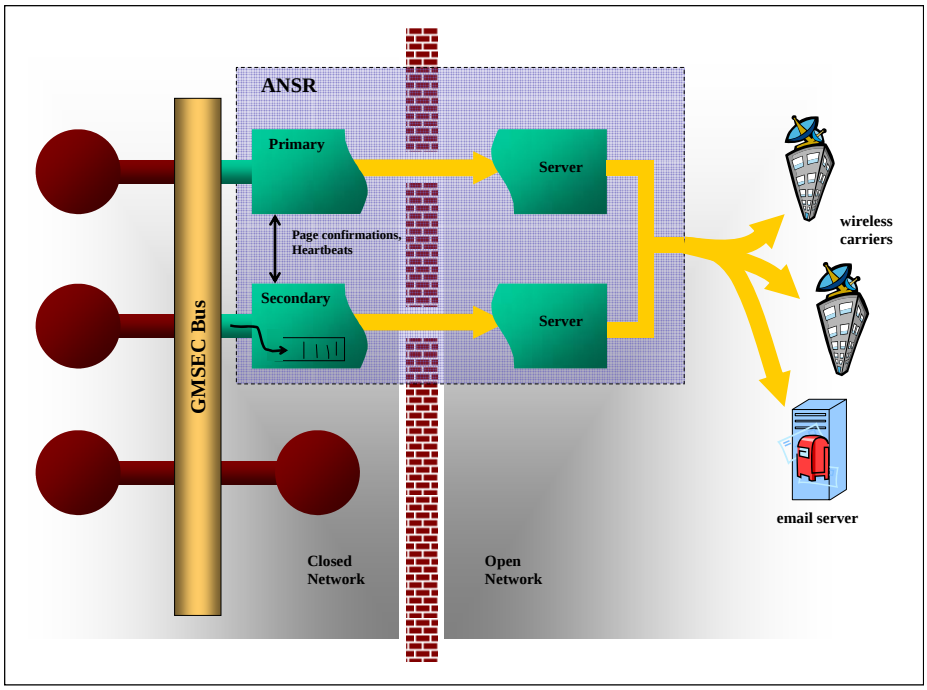

Architecture for redundant ANSR system spanning firewall

Reliability

- Stubs and Servers redundant to prevent single point of failure
- Supports multiple wireless carriers
- If primary stub or server fails, secondary will assume primary role
- Secondary stub queues all page directives and discards only after page confirmed
- Pages are tracked from transmission to acknowledgement by operator
- Will not lose pages, even in case of process failure

Requirements

- Platform independent, 100% Java
- Supports any WCTP compliant wireless carrier or SMTP email server
- Can be run on one or multiple machines
- Works across firewalls – closed side polls open side for page acknowledgements

Current Use

ANSR is used on the TRMM project to support single operator shifts.
In Sept. 2004 TRMM will move to lights out night shifts and rely exclusively on ANSR.