



Public Works

Manly Hydraulics Laboratory

Provision of IP Telemetry Solutions National Technology Reference Group

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Project Summary

- **Theme 2 – Improving the currency of measurement networks**
- Improve data availability using IP communication over NextG
- Current data <72 hrs old, with IP – <15 minutes, transmitted as soon as logged
- 100 sites in first round – more to come?



Why IP over NextG?

- 'Real time' data
- Real need – flood warning, RTA
- Perceived need – public demand for data
- Predominantly coastal sites – NextG coverage
- Lowest cost real-time method



Choice of Hardware

- Logger IP stack or use modem?
- Serial circuit extender – allows use with legacy loggers
- Development – lack of resources within MHL
- Survey of NSW agencies
- Hydrotel telemetry system



iQuest iCE3

- Configurable for CSD using AT set – familiar
- IP configuration menu driven
- Dual base – failover ‘base station’ IP
- Time syncing from NextG network

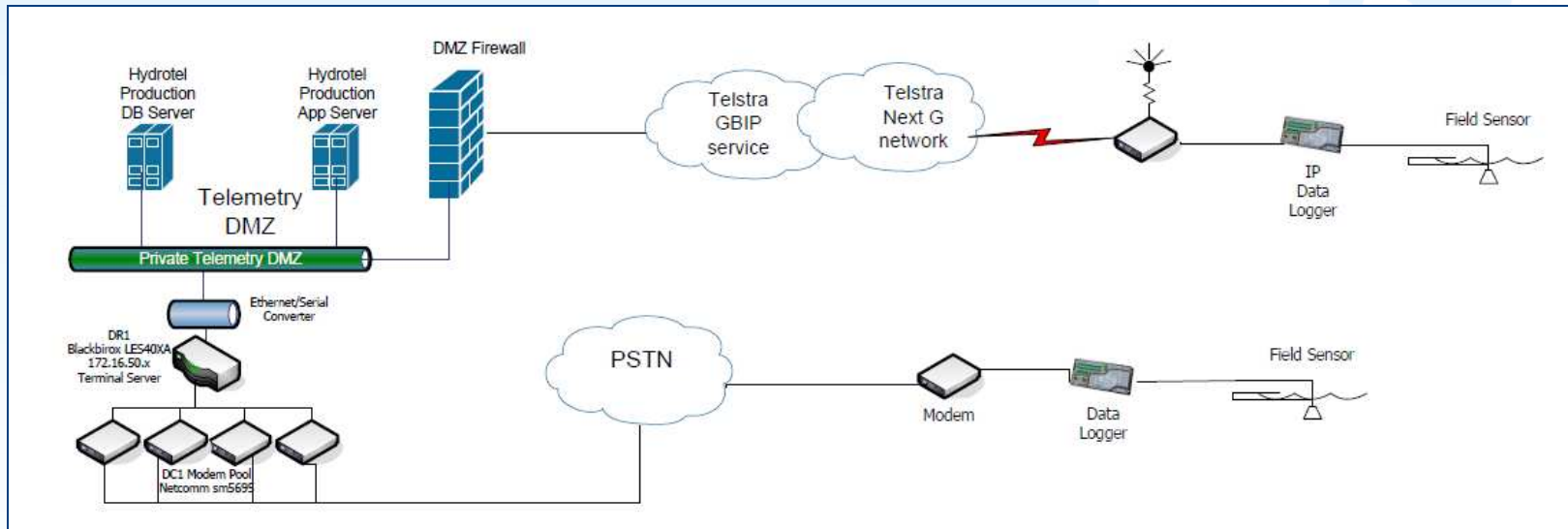


MHL VPN

- Global Switch data centre - redundant power, redundant communications
- Required high level of security
- mhl.nsw.gov.au APN
- All modems, connections and Hydrotel servers sit within the Telemetry DMZ

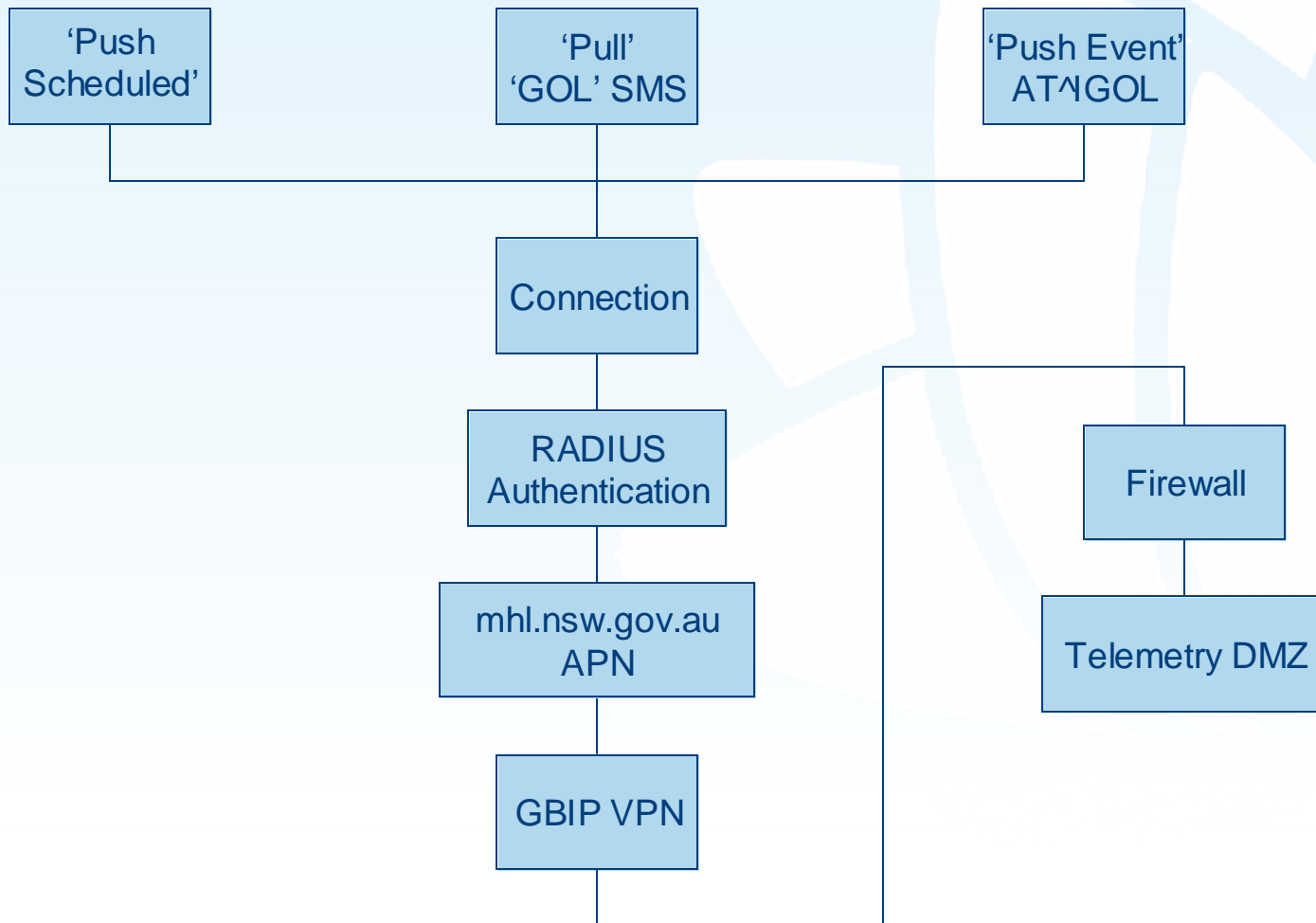


Hydrotel System





Connection Flowchart





Redundant Communications

- ‘High value’ sites – high public value, type 1, 2 Flood Warning sites as listed by NSWFWC
- Retain PSTN connection
- Hydrotel v4 will support ‘failover’ to PSTN, currently manual
- Increased cost running two forms of comms, however considered essential at this point



Enhancements – yes, already....

- Currently require CSD for maintenance
- Modem to act as server on command, all maintenance via IP
- Potential to save \$18K/annum
- More memory in iCE3 than RRDL, iQuest investigating contact closure/SDI, no analogue
- Telemetry DRS?