



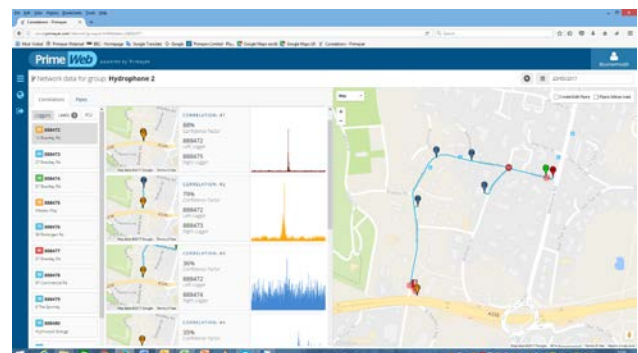
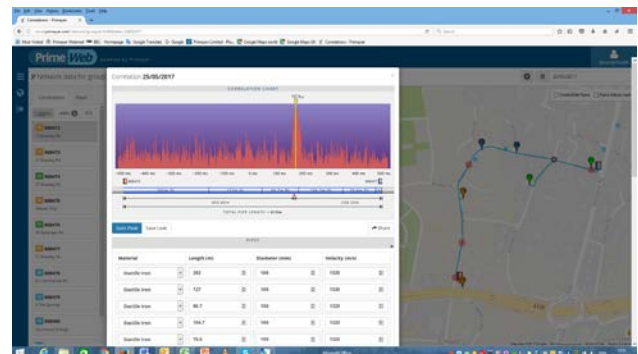
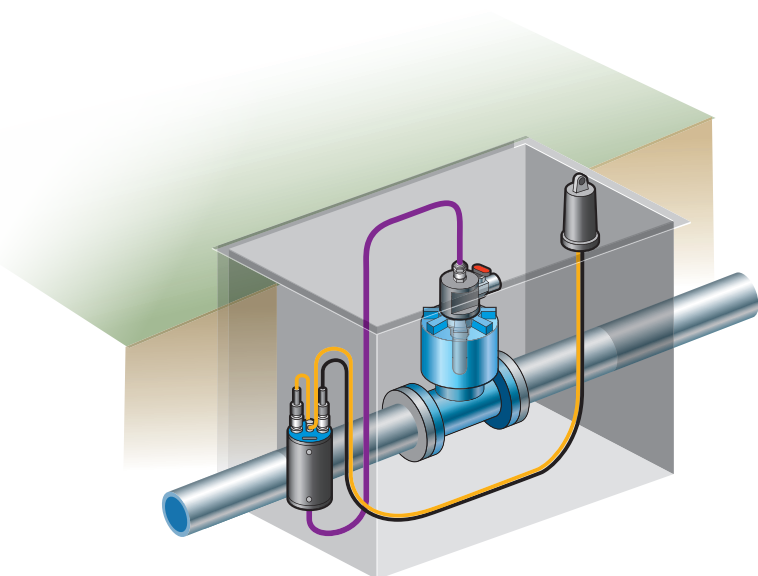
Remote leak pinpointing solution - incorporating hydrophone sensors

British Patent Number 2555053

Enigma3hyQ is a variant of the **Enigma3m** multi-point noise correlation system utilising 3G/ GPRS communications. **Enigma3hyQ** has been optimised for leak location over longer distances, on large diameter pipes and plastic pipes in water distribution networks. It is deployed in underground chambers and requires no costly above ground technology.

Features

- Correlation processing for accurate leak pinpointing
- High sensitivity hydrophone
- Powerful *Adaptive Filter* for optimum leak location performance
- Daily transmission for improved efficiency and reduced leak run time
- Simple installation – no above ground radio repeaters required
- Data available at any location via *PrimeWeb*



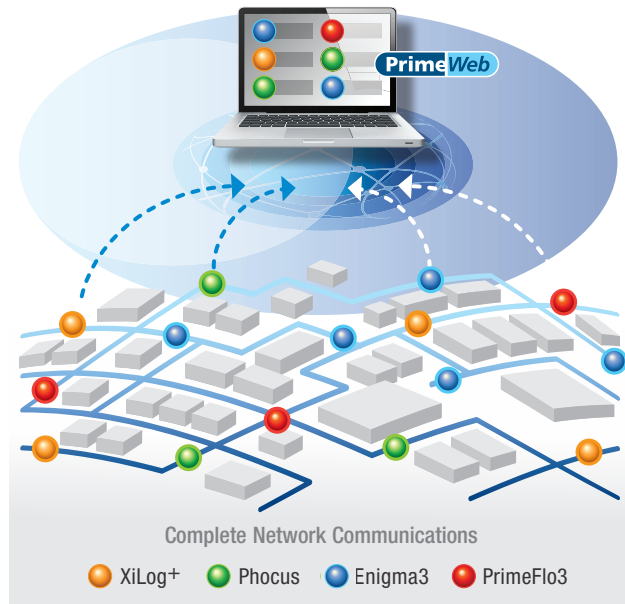
Multiple correlation results displayed with leak positions over distance of 614 metres.



Remote correlating noise logger with hydrophone sensor

Pipeline monitoring

The *Enigma3hyQ* correlating loggers transmit daily leak noise data to our server via the 3G or GPRS communication networks. Correlation is performed from many loggers to accurately locate leak positions. The user has the opportunity to listen to the recorded noise thus helping to confirm correlation results are due to leak noise. To enable accurate correlations a daily logger time synchronisation is carried out by a new technology.



Network flow, pressure and leak location data

PrimeWeb provides a database and on-line viewing facility for network flow, pressure and leak alarms from XiLog+ data loggers, Phocus3/3m noise loggers and Enigma3m correlating noise loggers. It is accessible on any device with internet access. Logger positions can be shown on Google Maps* and coded to show leak alarms. Historical data is also available. Indication of leak positions on Google Maps* together with 'street view' visualisation of the leak position aids management for leakage teams.



Integral logger with hydrophone sensor model



System features

- Aggregated correlations for difficult leaks
- Auto-velocity determination for accurate leak location
- Small size for fitting into underground chambers - *no above ground installation required*
- Logger powered for 5 years (dependent upon 3G/GPRS signal conditions)
- Logger GPS location saved
- Logger submersible to IP68

Products

Enigma3hyQ logger + hydrophone (GPRS only)	BXG 305
Enigma3hyQ integral logger + hydrophone (GPRS only)	BXG 331
Enigma3hyQ logger + hydrophone (3G / GPRS)	BXG 306
Enigma3hyQ integral logger + hydrophone (3G / GPRS not including North America)	BXG 333
Enigma3hyQ logger + hydrophone (3G North America)	BXG 307
Enigma3hyQ integral logger + hydrophone (3G / GPRS North America)	BXG 334
Communications Module	BXG 901

British Patent Number: 2555053.

*Google Maps is a registered trade mark of Google Inc



Primayer Limited

Primayer House, Parklands Business Park
Denmead, Hampshire PO7 6XP, United Kingdom
T +44 (0)2392 252228 F +44 (0)2392 252235
E sales@primayer.com
www.primayer.com



Information in this document is subject to change without notice.

LIT-E3H-044-1.3