



Real-time Data Collection and Aggregation from Disparate Sources

The wide-area transportation and consolidation mechanism for data from sensor networks



Deriving value from Data Networks

- Requires a means to access and consolidate and store it
- Preferably one standard platform
- Easily accessible
- Automated evaluation tools

We refer to this as “Middleware”

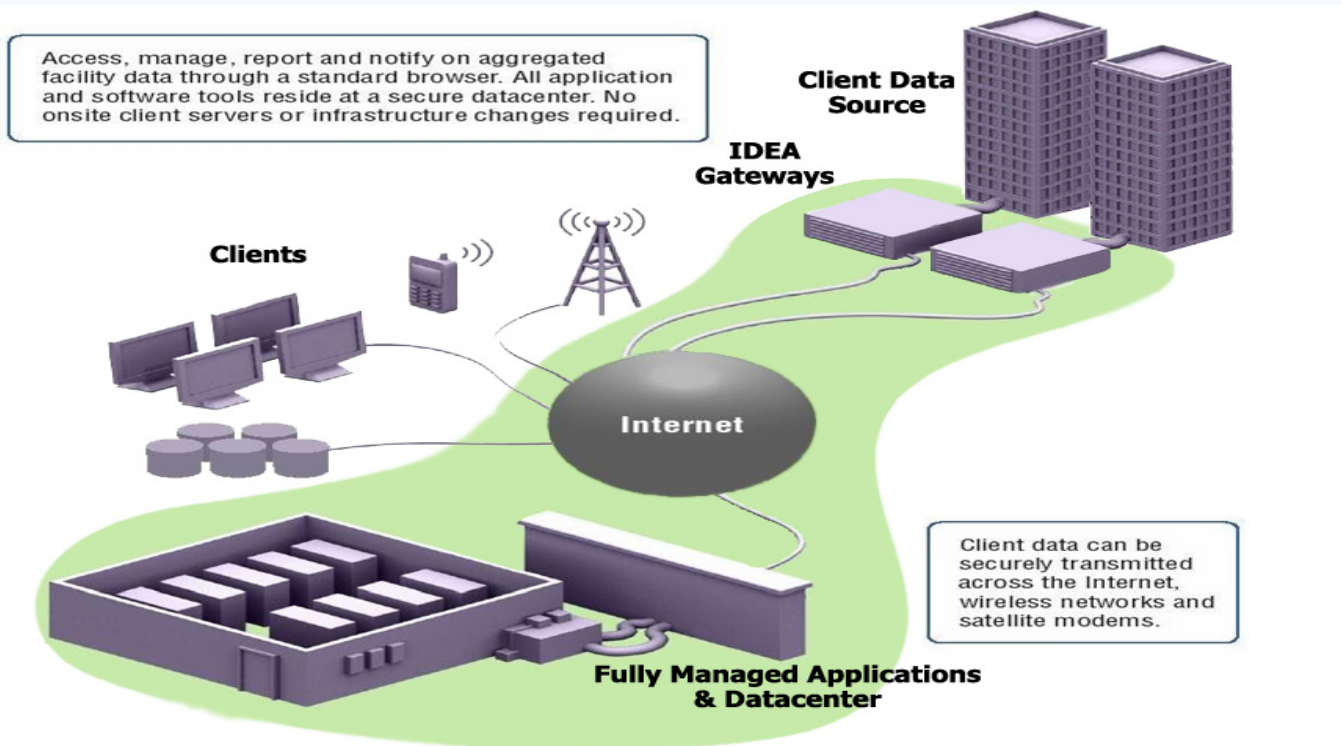


Middleware

- Captures data at the data source continuously, in real-time
- Quickly and securely communicates over the Internet
- Stores in a web-accessible, highly organized data centre
- Provides tools to view, evaluate, notify and relay



How it is done





Suitable Markets and Technologies

- Industrial, Commercial and Multi-residential
- Data sources can include:
 - IT systems
 - Building Automation and PLC systems
 - Server Systems (SNMP traps)
 - RFID and similar technologies
 - Zigbee and other mesh networks



Industrial Applications

- RFIDs for people identification
- Cellphone wand for prescription drugs
- Machine data acquisition (smart equipment)
- Case study – Mission Critical Data Centres:
 - Web-based alarm notification in 4-20 seconds
 - Post event data analysis
 - example of benefit – faulty relay in gen-set remotely diagnosed and corrected



Commercial Applications

- Building utility meter tracking and validation
- School performance contract validation
- Demand Response control, and M & V
- Case study – MURB Energy Performance:
 - Web-based BAS and utility tracking
 - Equipment to utility rationalization
 - Equipment performance improvement
 - Net gas savings of 11% over first 3 months with no capex



How Dimax Uses “Middleware”

- Connect to disparate data sources in a multiplicity of locations/sites
- Aggregate, baseline and benchmark data using web-tools
- Automated notifications based on business rules
- Remote supervisory control for performance improvement