Innovation

Remote monitoring system: new safeguard

The importance of connectivity and information has seen a huge upsurge in interest for Remote Monitoring Systems (RMS) which present data on a real time. Sriram Ramakrishnan writes how users, facility managers and service managers can monitor and manage their critical assets

Pervasive communication technology has changed the world as we know it. Wire line, wireless, and satellite communication today provide connectivity in most habited parts of the globe. This coupled with decreasing cost of communications and electronics has opened up the opportunity to connect people and devices on an on-demand 24/7 basis across the world. Connectivity, information and uptime are key buzzwords that determine business outcomes and customer stickiness. This has seen a huge upsurge in interest for Remote Monitoring Systems (RMS) which present data on a real time basis. This allow users, facility managers or service managers of any organisation to monitor and manage their critical assets distributed in multiple locations on a real time basis from any location in the world.

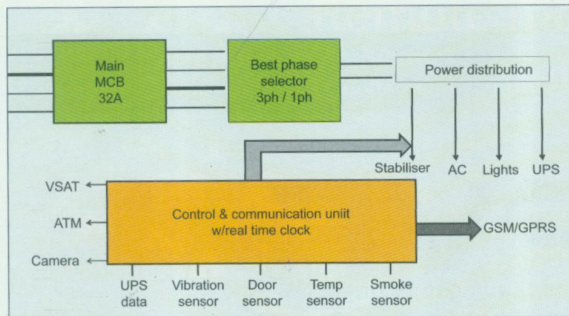Today RMS can alert through text messages, email notification or a recorded message when there is a change in status or a potential problem. Many businesses have grown with multiple locations, increasing demand for man power, information and availability around the clock. Business organisations, which are running many branches and centres, find cost prohibitive to deploy feet on ground to monitor each and every site and node. In this situation, RMS comes across as a valuable cost-effective tool and solution.

An RMS automatically communicates system diagnostic information from a monitored appliance to a remote service centre at regular intervals. This allows for better decision making based on real time information flowing in from the sites. This enables service levels to be maintained at the desired levels. A large number of appliances supplied by OEMs today come with data ports which can be monitored from a remote location when enabled. Even if the appliance does not have a data port, external systems are available to capture the required information using external sensors and measurement devices, and this information can be transmitted remotely. The remotely gathered data on the vital system parameters and the environmental conditions enable timely maintenance and a full report on working parameters. A back-end software platform to aggregate and present the data will help monitor trends over the lifespan right from installation of a single site and/or compare performances between multiple sites.

A key adopter of RMS is banks. A bank's reputation depends on customer trust, which can be achieved by demonstrating a consistent, secure service which is provided through a network of branch offices and ATMs. Alongside securing their ATMs,

![India Media Monitor logo]

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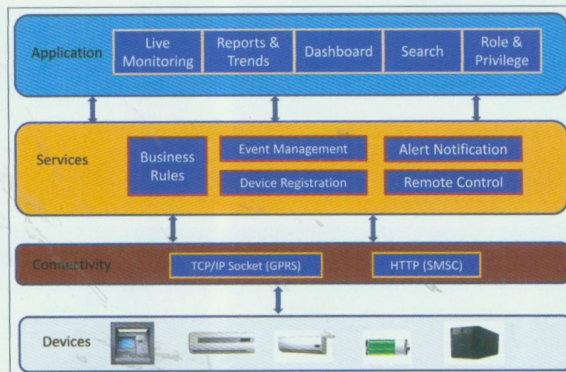
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Consul iPEMS-ATM block diagram

real time basis and can generate actionable reports. It is also able to prevent theft with the RMS immediately alerting the remote monitor through text or voice message.

Each device within the ATM kiosk will be equipped with a communication module and a sensor for data collection. The data generated from this communication allows a bank or an ATM service provider to gain insights. The two-way communication between machines eliminates the need for human intervention in many routine service operations. This includes switching off and on the lights or adjusting the air-conditioner temperature settings and even remotely reboot the ATM when systems are hung up.

banks must have robust security measures to secure their branches. Combining physical and electronic security solutions is the key driver to success in this area as it ensures seamless communication across all operational platforms. Most important, integrated solutions enable banks to provide a physical response to business continuity processes, preventing security risks.

The shift to active monitoring systems from the existing passive monitoring through CCTV systems is required due to the changes in the business model. Remote monitoring and access control mean a bank's property is constantly monitored: onsite, remotely, or central monitoring centre. Visible security solutions are paramount for customer reassurance and criminal deterrence.
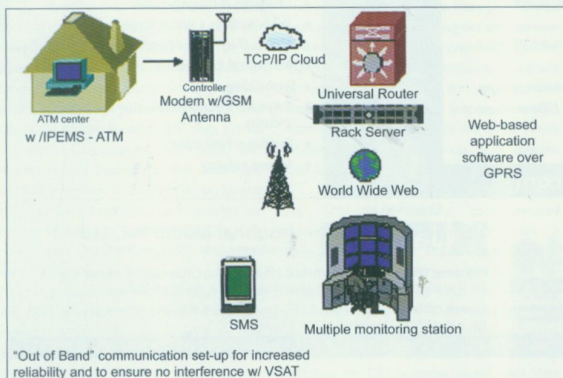

Consul iPEMS-ATM software architecture

The iPEMS system enables ATM site manager to remotely monitor infrastructures like air conditioners, cameras, lighting systems, battery banks and door-lock systems on a RMS like iPEMS allows optimum energy use through timer and sensor-based controls for the site air conditioner and lights of the lobby, backroom and signage. This can considerably save in the utility power bills.

Integrated RMS systems allow for remote monitoring, real-time reporting, problem diagnosis and site control in a cost-effective way on a 24/7 basis which ensures that business can boast of close to 100 per cent uptime. ∎

"Out of Band" communication set-up for increased reliability and to ensure no interference w/ VSAT

Consul iPEMS-ATM communication architecture

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