Executive Summary

Despite talk of "paperless" office concepts since as long ago as 1975, it appears in 2010 that printing is here to stay. Paper documents remain central to much of office life, and the printers within an organization are still critical to productivity.

However, it is widely accepted that print operations are expensive to run and maintain – in three primary dimensions:

1. **Time** – device downtime is costly, both in terms of reducing immediate organisational productivity and having maintenance staff attend to the situation
2. **Cost** – consumables (paper and toner) are renowned for their expense, and downtime also has a cost dimension
3. **Environment** – consumables usage and regular maintenance visits contribute to the environmental implications

Each of these three dimensions are of mounting importance to business, not only due to the traditional focus on bottom-line performance but more recently also on CSR performance which is becoming a standard KPI of many organizations.

In order to address some of the above issues, recent trends, particularly highlighted during the recent global economic slowdown, are towards companies outsourcing elements of their support functions (particularly elements of IT and HR) with the aim of securing some or all of the following benefits:

- Reducing fulltime staff overheads
- Reducing investment in hardware through leasing agreements
- Guaranteeing pre-determined service levels through SLA's
- Ensuring access to the latest technology and expertise

Remote printer diagnostics corresponds neatly with this trend, removing administrative elements of the IT function (toner replenishment, meter reading and sometimes fault diagnostics) from the IT department, with the manufacturer instead assuming responsibility for them remotely and as part of a service agreement.

So what are remote printer diagnostics? How do they work? What's required to run them? And which manufacturers offer these services?

This report will explore the latest in remote diagnostics within the APAC region, covering Singapore, Malaysia, Brunei, Indonesia, Thailand, Vietnam, India and Sri Lanka, and will illustrate the mutual benefits (for customer and manufacturer) that this technology brings.

In order to provide this impartial, independent summary, Kadence International thoroughly explored all manufacturer websites throughout the region (as of mid-September 2010), following this up with additional "mystery shopping" calls to each manufacturer to supplement any lacking information. All information provided therefore has either been found on websites or provided by call centre staff, and Kadence International cannot assume responsibility for the reliability of the results provided.
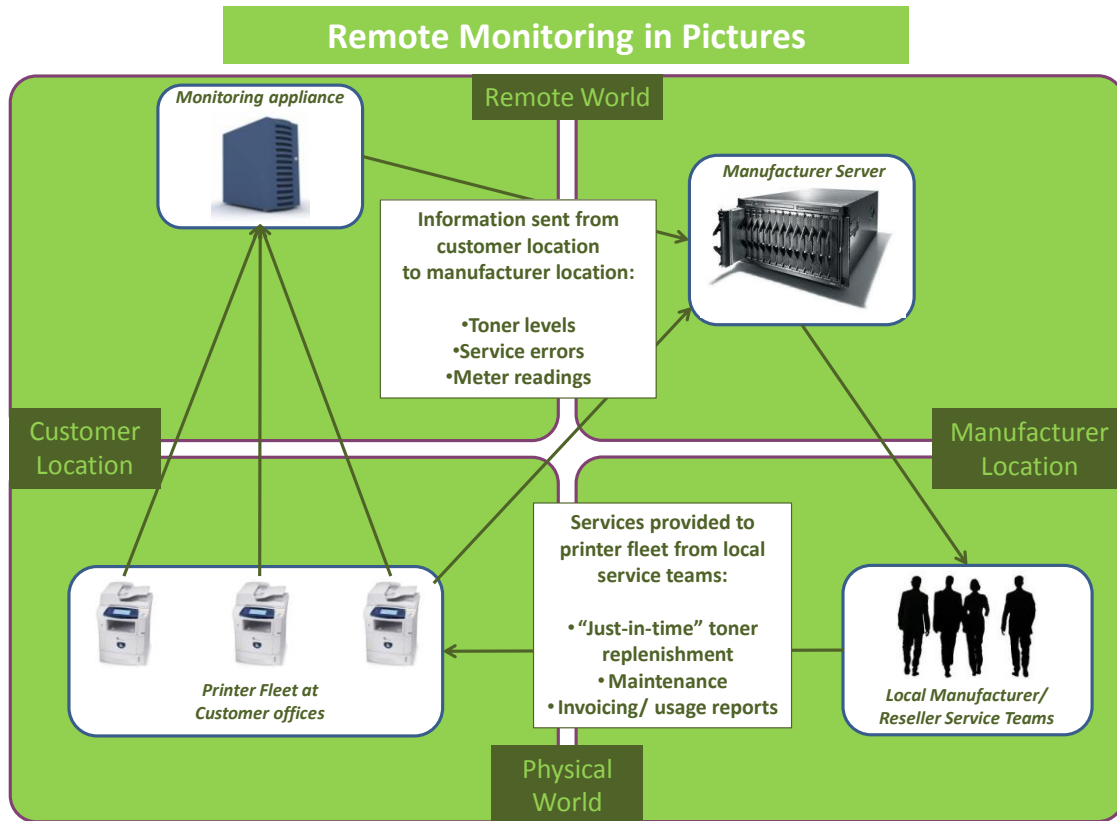
How do Remote Diagnostics work and what is required to run them?

Remote diagnostics systems are generally provided as an additional service from printer manufacturers in combination with **clicks-based service contracts**. These service contracts involve the manufacturer leasing MFP's to their customers, and providing maintenance and service throughout the lease period. Customers pay a pre-agreed "price-per-print" which covers their print usage as well as maintenance and service components.

Remote diagnostics allows this lease-based system to work more efficiently, provided that:

a) the MFP devices are networked, and
b) that the network is connected to the internet

Technically remote diagnostics systems are uncomplicated and secure. By sending uni-directional information over the internet (from the customer server or indeed from the printers direct to the manufacturer), the manufacturer can receive all necessary information from the customer, and does not need to break down security features like Firewalls. This information is passed in turn to the local service teams, allowing them to optimize their service delivery.

Kadence International

Remote Monitoring in Pictures

Remote World

Monitoring appliance

Manufacturer Server

Information sent from customer location to manufacturer location:

- **Toner levels**
- **Service errors**
- **Meter readings**

Customer Location

Manufacturer Location

Services provided to printer fleet from local service teams:

- **"Just-in-time" toner replenishment**
- **Maintenance**
- **Invoicing/ usage reports**

Printer Fleet at Customer offices

Local Manufacturer/ Reseller Service Teams

Physical World

What are the elements and benefits of Remote Diagnostics?

Remote diagnostics tend to consist of 4 core elements:

Feature	How it works	Benefits for Customer	Benefits for Manufacturer
1. Remote meter reading	Allows manufacturer to read meters without having to send technician	• Improves accuracy of meter reading and transparency of billing • Saves time – don't need technician onsite	• Saves time – don't have to send technicians to perform readings
2. Toner replenishment	The remote diagnostic system alerts the printer manufacturer (and owner of print solution contract) when toner is running low, allowing the manufacturer to deliver "just-in-time" to the customer	• Maximises toner usage (ensuring that toner is fully used) – cost and environmental benefits • Optimises inventory (always maintaining stock, but only of most minimal volumes)	• Ensures own-brand toner is being used within their installed base of printers • Improves customer closeness and loyalty
3. Problem identification	Sends error messages to manufacturer, who informs local support infrastructure of issue, thus allow (at times proactive) maintenance	• Improves speed of maintenance response • Optimises device uptime and increases productivity	• Time efficient – technicians arrive on site, knowing what tools and service parts they may require to execute a quick repair
4. Remote administration of printer fleet through customer portal	Either through a web interface or a standalone portal, customer gets access to information with regard to the operation of their printer fleet	• Allows understanding of print volumes by printer, and potential to optimize usage	• Allows manufacturer to perform analysis on customer usage, thus strengthening customer relationship

The combination of all of the above factors is reducing the administrative burden on already-stretched IT departments, and allowing IT Managers to invest more time on strategic issues instead.

Kadence
International

What Remote Diagnostics options are available in APAC?

Advertised APAC Brand Coverage for Remote Diagnostics								
	Canon	**Hewlett Packard**	**Fuji Xerox**	**Konica Minolta**	**Kyocera**	**Panasonic**	**Ricoh**	**Sharp**	**Toshiba**
Brunei	eMaintenance		prInteract		KM Net		@Remote		
India	eMaintenance	HP Web Jetadmin Software	PhaserSmart				@Remote		e-Bridge Device Manager
Indonesia	eMaintenance	HP Web Jetadmin Software	prInteract	Digital Doctor			@Remote		
Malaysia	eMaintenance	HP Web Jetadmin Software	prInteract	Digital Doctor			@Remote		
Singapore	eMaintenance	HP Web Jetadmin Software	prInteract	CS Remote Care	Auto Email Alerting		@Remote	No name provided	eFleet Maintenance
Sri Lanka	eMaintenance		eMeter Automatic Meter Readings	Digital Doctor		RDS (Remote Diagnostic System)			e-Bridge
Thailand	eMaintenance	HP Web Jetadmin Software	prInteract	CS Remote Care			@Remote	No name provided	
Vietnam	eMaintenance	HP Web Jetadmin Software							

As can be seen, the leading brands in terms of the development and communication of their remote diagnostics systems are **Canon, Ricoh, Hewlett-Packard and Fuji-Xerox**, each of which has provided their remote diagnostic service with a mainly consistent sub-branding and specification across the APAC region.

However, for the less established brands (Konica Minolta, Kyocera, Panasonic, Sharp and Toshiba) information is less reliable, with websites and call centre staff providing less consistent information, branding and offering (both in terms of service and geography) not being as clearly defined as for the major brands.

So what are the service propositions of the leading manufacturers?

Whilst the geographic coverage of the leading brands differs as above and each brand emphasizes the benefits of their systems differently, few fundamental differences are evident within the core elements of their service offerings. The leading companies have being developing this technology for nearly a decade and there's little to differentiate them in terms of service delivery. When Kadence assessed the public domain information of each manufacturer it is evident that remote diagnostics services consistently entail:

- Remote meter reading
- Remote toner replenishment
- Remote error reporting

Looking at the leading brands in turn, we find similar service elements for each brand:

- Canon
  - Consists of 3 main features – eMeter-reading, eToner and eProactive
  - *eMeter*-reading – Cuts the tedium from manual processes, and provides more accurate service billings, and potentially savings
  - *eToner* – Provides "what toner you need, when you need it" by communicating to service teams when customers' toner is running low

- - *eProactive* – Intelligent system providing an email with a code number to every error, and allowing engineers to arrive on-site "before you even know there's a problem"[i]
- Ricoh
  - Somewhat less developed network than other brands and information on remote diagnostic options not as easy to find
  - Collects meter data, but no specific mention of instant alerts
  - Error notification not mentioned in all markets
  - Supply management across markets not entirely consistent
- HP
  - Usage reports, supply alerts and error reports form the core offering from HP
  - Some inconsistency in terms of marketing approach
    - Only sporadic mention of remote management
    - Does not specifically mention automatic meter reading
  - Marketing messages are slightly different in:
    - Indonesia – "usage and workflow benefits"
    - Other markets – "time, cost, alerts benefits"
- Fuji-Xerox
  - Consistent in offering across markets – all have common usage of word "automatic", highlighting the fact that the customer doesn't have to interact with the service
    - Web-enabled remote-monitoring
    - Meter-reading
    - Error notification
    - Supplies management
  - Two marketing approaches evident:
    - Singapore, Malaysia and India - "Diagnosis, issue resolution and maintenance"
    - Vietnam and Indonesia - "Cost, efficiency and control".

Evidence exists to suggest that remote diagnostics (for all brands) is more established and consistently delivered in the larger, more economically developed markets of Singapore, Malaysia and India, as opposed to Vietnam, Sri Lanka and Indonesia.

Conclusion

With the technology long-established, the remote diagnostics business model is now widely accepted in the EU and US, and is increasingly available in the leading markets in Asia (Singapore, Malaysia, India). Given that the same reliable, unobtrusive technology is in use in APAC, it is forecast that the rate of adoption of this model will accelerate within APAC over the coming months and years.

We believe that 2 components are necessary to further accelerate this adoption within APAC

1. For Asian customers to become more accepting of "bundled" solutions – i.e. paying upfront for a monthly service
2. For manufacturers to effectively communicate the long-term value that such solutions can bring, negating the short-term appeal of easy-to-source, but poor quality counterfeit toner.

Once these minor issues are addressed in Asia, we anticipate broad-scale adoption of remote diagnostic services across printer fleets in all industry sectors and company sizes.

---

[i] Can be subject to a fee in certain instances