

# HERON

Enabling better health care through effective IT solutions



**HERON Technology Corporation**

Linux Brochure

## HERON AND THE LINUX OPERATING SYSTEM

**This brochure addresses the world market's reaction to the LINUX Operating System and why Heron uses it to support their Patient Administration System (PAS).**

From ITBusiness Report, May 2003. By Dave Webb

### Why LINUX, Why Now?

**There are many reasons to believe the open source operating system is hitting its stride in the enterprise.**

LinuxWorld 2002 in San Francisco marked a watershed for the open source operating system. Big Computing was out in force — HP, IBM, Sun Microsystems — wooing the geeks with product and service launches and general abandon. Sun jumped back into the 32-bit server market it had given up on in 1990 with its Linux-based LX-50. IBM countered with a "three-pronged attack" that included "SWAT" teams to migrate Sun customers from the proprietary Solaris Unix platform to IBM-based Linux on its own x335 server. Even open source nemesis Microsoft had a presence there, warily observing the proceedings. If Linus Torvalds' brainchild hadn't been prime time material before, the big vendors were sending the message that Linux was indeed ready for its close-up, Mr. DeMille.

Alan Freedman, research manager, infrastructure hardware with IDC Canada in Toronto, says Linux is the only OS showing significant growth in the number of servers shipped — 31 per cent for 2002, and a predicted 60 per cent in 2003, compared to three per cent growth for Windows boxes and virtually flat Unix numbers.

That underestimates what's actually happening in the market, though most copies of Linux are downloaded, not shipped installed on servers.

*To read the rest of this article, please visit our website.*

From The Inquirer. November 20, 2002. By Egan Orion:

### Linux wins one in India

**State that is....**

AT LEAST ONE SAVVY state government in India has told Bill Gates to get lost and take his "free" Microsoft software with him, according to a story in Economic Times.

Chief Minister Digvijay Singh of Madhya Pradesh told Gates personally that the State will be going forward with projects based on Linux. The most visible of these is the Headstart programme for computer-aided education. The first phase of that initiative used Windows, but the government has decided to switch to Linux for the second phase.

R Gopalakrishnan, state coordinator for the Rajiv Gandhi missions said: "This should set at rest any fears that we are anti-Microsoft as such. But we have opted for Linux in this phase, because of the cost factor, and the fact that it avoids costly upgrades and improved versions that are an inseparable element of Microsoft packages".

According to Mr. Singh: "For us it is not a question of Microsoft versus Linux. It is just a matter of choosing between a free software and a monopoly. We feel that when we are putting public information out in the open, then it should not be through a proprietary software.

"It is a considered decision taken by us. We have noted that several governments in the west and other countries too have opted for the Linux software instead of Microsoft because of a host of considerations."

**For more information, visit our website at:  
[www.herontech.com](http://www.herontech.com)**

HERON press release, March 17, 2000

## LINUX O/S in Jamaican Hospitals for PAS

March 17, 2000, Markham, Ontario, CANADA: Heron Technology Corp. (HTC) announced today that it is now installing the Linux open source operating system in six hospitals in Jamaica in support of the HTC PAS [Patient Administration System]. The PAS contract, valued in excess of \$1 Million [Cdn], was received in the fall of 1999 from the Ministry of Health of the Government of Jamaica. The contract relates to the provision of application software modules, training and implementation services to computerize 18 hospitals in that country with the PAS.

The Canadian Government, through Canadian Commercial Corporation [CCC] a \$1 billion annual business reporting to the Parliament of Canada, has entered into this contract with the Government of Jamaica on behalf of HTC, to provide these additional products and services during the next two to three years, during which time standardized IT systems will be implemented in all of the Government hospitals in Jamaica.

The contract, signed by the Minister of Health, the Honourable John Junor, and by the Permanent Secretary of Health, George Briggs, is an add-on to the original HTC contract for the computerization of five hospitals, valued at \$420,000, signed in March of 1997. The first 5 hospitals became fully operational with their computerized systems in February of 1998. The total of 23 hospitals, representing over 4,000 hospital beds, covers all Government and Specialist hospitals in Jamaica, and covers a population of 2.5 million.

The HTC PAS application software modules address the functional processing needs in such departments as Admitting, Inpatients, Outpatients, Accident & Emergency, Billing and Accounts Receivable, Health Records Abstracting, and MOH Statistical Reporting. The IT (Information Technology) systems will be the same in all hospitals, providing significant cost benefits in such areas as initial and on-going training, employee transfers and hiring, data information exchange and MOH data collection, because of the standardized procedures and coding at all facilities.

Industry information indicates that Jamaica is the first, and only jurisdiction in the world to plan to implement a standardized on-site PAS in all public hospitals.

No on-site hospital technical support personnel are required for the HTC PAS, which would be prohibitively expensive were 23 hospitals expected to support such a technical cost at each site. HTC supports all sites remotely, at minimal cost.

According to Peter Wright, Senior IT adviser at the Jamaican MOH: "The performance of the HTC PAS is second to none. It has functioned with very limited downtime [only 72 hours] since its implementation more than two years ago. Collectively, there are more than 100 users, working 24 hours a day, 7 days a week, in the five institutions.

Accordingly, the up time experience equates to an impressive 99.995% during the past two years, the equivalent of over 1.5 million hours of end-user operation".

Mr. Wright adds, "This is attributable to HTC's solid application program code, and to the very stable UNIX operating system."

Contributing to the Government's decision to extend the HTC PAS to the additional 18 hospitals, is the very low TCO [Total Cost of Ownership] exhibited by the HTC systems.

The introduction of the Linux operating system, version 6.0 from Red Hat Software, further contributes to the Government's objective of keeping costs in line, since Linux is free. An individual hospital could easily have over 100 desktop devices in operation, and accordingly the savings will be considerable. The Linux O/S is now rapidly becoming the O/S of choice around the world.

The PAS desktop devices can be very low-cost "thin clients", or CRT devices, instead of having to be PC's [Personal Computers/fat-clients] which are mandated by many software vendors. This non-PC approach [thin-client] can reduce the on-going technical support and maintenance costs by as much as 80%, as reported by such noted industry experts as IDC, and the Gartner Group Inc., a Stamford, Conn.-based research firm.



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TO THIS COMMUNICATION SHOULD BE  
ADDRESSED TO THE PERMANENT  
SECRETARY AND THE FOLLOWING

November 14, 2002

Ron Hébert  
Heron Technology

### Canadian Awards for International Cooperation - Jamaica PAS

The **Ministry of Health Jamaica** embarked on a process of computerization of hospitals. This has been done utilizing a Patient Administration System (**PAS**) developed by **Heron Technology Corporation**, which has seen the computerisation of eleven of the twenty-two hospitals across the island. This system provides a standardised data platform that collects data on 70% of the discharged patients from hospitals islandwide.

The PAS has been customised allowing for the addition of modules readily adaptable to the users needs. In Jamaica four modules have been added to the **PAS** to allow for injury surveillance. This system called the Jamaica Injury Surveillance System (**JISS**) contains modules for tracking motor vehicle accidents, violence related injuries, accidental injuries and attempted suicides. The availability of these data characterising injuries has allowed for production of reports both at the local and national level and provides guidance for an intersectoral approach to activities aimed at reducing the disease burden due to injuries.

Another planned development is to add an occupational injury module to **JISS** and this will be presented in June 2003 to other health personnel within the Caribbean region and to **PAHO** Occupational Health and Safety Division. These developments are a clear indication of the interest in what Jamaica is doing re the utilisation of computers in health care within the **PAHO** region.

Yours sincerely

Dr. Elizabeth Ward  
Director, Disease Prevention and Control

PeopleSoft press release, May 6, 2003

## PeopleSoft and IBM Team to Deliver Enterprise Solutions for Linux

### Linux Ready for Primetime

May 7, 2003 - Today at its 2003 Leadership Summit, PeopleSoft Inc. (Nasdaq: PSFT) announced a strategic joint development initiative with IBM Corp. (NYSE: IBM) to port and optimise PeopleSoft's industry-leading enterprise applications to Linux running on IBM hardware and software. PeopleSoft has selected IBM eServer xSeries, DB2 Universal Database and WebSphere Application Server as its Linux development platform of choice. Companies running mission-critical PeopleSoft applications on Linux and IBM eServer xSeries systems will benefit from improvements in performance, reliability and manageability for core business applications.

"Linux is ready for primetime -- it is now capable of running mission-critical applications," said Rick Bergquist, chief technology officer, PeopleSoft. "We're teaming with IBM to deliver PeopleSoft applications in a Linux environment, which gives our customers greater choice and is another milestone in our commitment to open standards."

"As businesses look to maximise their existing IT investments with an eye to the future, Linux is becoming increasingly attractive. PeopleSoft customers now have the option to go with this reliable, low-cost operating system to streamline business processes and develop an open, on-demand environment that enables greater responsiveness to customers and suppliers," said Steve Mills, senior vice president and group executive, IBM Software Group. "Building on our strategic alliance, this agreement represents the broadest commitment to deliver industry-leading solutions using IBM hardware and software for Linux by an application partner to date."

All PeopleSoft applications will be supported on Linux.

Reuters, Wed May 28, 2003. By Hans Nagl

## Microsoft Loses City of Munich Deal to Linux

**MUNICH (Reuters) - The city of Munich said on Wednesday it would switch 14,000 computers from Microsoft's Windows operating system to rival Linux in a deal estimated to be worth tens of millions of euros.**

The decision is a blow to U.S. giant Microsoft, whose chief executive Steve Ballmer had personally campaigned for Microsoft's counter-offer to the city, based on Windows XP.

Microsoft has created two funds to discount its products against the emerging Linux software, which is eating into its most profitable business.

"This strategic decision makes Munich less dependent on one IT supplier and sets a trend toward more competition," Munich mayor Christian Ude said in a statement.

Analysts said Munich's decision to choose open source software, which means Linux, was a breakthrough.

"It is one of the largest desktop migrations to Linux ever seen," said Gartner Dataquest analyst Nikos Drakos in London.

Linux suppliers welcomed the move by one of Germany's largest cities, where many of the country's biggest corporations have their headquarters.

"You can compare this to the fall of the Berlin Wall," said Richard Seibt, Chief Executive of Linux software provider Suse. Suse is bidding for the Linux contract together with International Business Machines Corp.

Linux is considered by many to be the only big rival to Microsoft's Windows and can already be found on 15 percent of all computers sold in Western Europe.

A Microsoft spokesman in Munich said his company was still at hand if the city found that certain units could not switch over to Linux. "Some applications do not run on Linux," he said.

### LINUX GROWING IN GERMANY

The Munich decision comes as the German government is installing Linux throughout certain ministries and public institutions.

In the northern state of Lower Saxony, 11,000 police computers will be switched from Microsoft Windows to Linux next year, according to the interior ministry.

Companies and governments are increasingly opting for Linux, written by Linus Torvalds and further developed on the Web with the help of thousands of volunteer programmers, because it is a stable software and not controlled by just one company.

Hundreds of companies distribute the software, charging little or nothing for the core software, but taking fees on modifications, services and maintenance.

IBM and Suse declined to give the value of the bids for their Linux offerings.

Media have reported that Microsoft's offer of about 27.3 million euros (\$32.3 million) had been almost three million euros below that of the Linux competitor, but the city had still chosen Linux for strategic reasons.

Microsoft confirmed it had offered discounts for the total project, but declined to give details.

Friday November 29, 2002

## the inquirer

### India moving to Linux

It's simply economics

By Egan Orion Thursday 10 October 2002, 06:45

**INDIA'S GOVERNMENT** Department of Information Technology has announced a sweeping initiative to move the entire country to Linux as its "platform of choice" in place of higher cost "proprietary" software, reports the *India Times* subsidiary *Economic Times*.

The plan is to establish Linux in Indian academic institutions as well as throughout central and state government offices. India's business sector will also likely move to Linux for its lower costs and to employ the Linux skills developed in the large Indian workforce.

As a developing country, India feels the bite of expensive proprietary software licenses much more acutely than other countries with mature economies. Enforcing intellectual property rights - as India has pledged to do - will spur its takeup of Linux open source software.

India also doesn't want to be caught napping while mainland China builds up formidable IT infrastructure solutions, and services. It's big neighbour also embraced Linux with a similar government initiative.

Also China's interest in Linux is partially motivated by security concerns, India's decision seems to be based on simple economics.

# What is a Hospital Information System (HIS) and What is its Patient Administration System (PAS) Component?

## Modules within an HIS

A Hospital Information System (HIS) consists of many Clinical and Financial application software modules, over 20 in total. The question often arises as to where a hospital jurisdiction should begin when it has been decided to implement an HIS throughout the country.

The main Application Software IT components within an HIS are:

- Patient Administration System
- Diagnostic Imaging System
- Middleware (Integration Engine)
- Financial Applications
- Clinical Laboratory
- Other Clinical Applications

## Starting point and time frame for an HIS implementation

Where to start, and over what period of time would it take to implement an HIS, in a particular country, are often very challenging questions and of real concern to those who have not gone down this road before.

### a) Where to start?

The core component, and starting point, for a country is the PAS, which includes a Master Patient Index (or Central Patient Index), and the Surveillance modules. This establishes the central repository of patient data that records all patient encounters, and which is the module to which future Clinical (and some Financial) modules will be integrated.

### b) How long will it take for a PAS/HIS implementation overall?

The length of time required to implement a PAS will be dependent upon many factors, and will vary from country to country. Typically this will be from 2 to 7 years. Some factors are:

- The level of commitment at the top
- The number of hospitals and clinics within the country
- The GDP per capita and annual health care budget of the country
- The infrastructure of the country
- The level of success achieved in the first Phase of the implementation

The length of time required for a full HIS implementation will typically vary most considerably, and will be in the range of 10 to 15 years, or longer.



## FAQ

### What is LINUX and why is it becoming so popular?

The operating system that is causing a revolution in the world of computers. LINUX is a free Unix-type operating system originally created by Linus Torvalds, of Finland with the assistance of developers around the world. Developed under the GNU General Public License, the source code for Linux is freely available to everyone. This is quickly becoming the operating system of choice in China and developing countries such as India. Major North American corporations are also adopting LINUX as a way of saving money on IT systems and licensing fees. Canadian National Railways (CNR) announced their move to Linux in December 2002.

HERON's PAS operates under the LINUX OS. HERON has finalized and time tested the PAS product development, and method of implementation

## Canadian Commercial Corporation (CCC):



A very important consideration associated with international marketing is the aspect of the purchasing country receiving a **'Sovereign' Guarantee** from the selling country. This sovereign guarantee was extended to the Jamaica MOH by CCC in 1997 for the HERON PAS implementation, and can be anticipated in other countries, depending upon the business contract. CCC has shown considerable interest in HERON through an article in the 1998 CCC Annual report and through a write up in CCC's newsletter, the Exporter, in 1999.

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