

**Stream Title:** Application Deployment and Integration  
**Vendor Name:** Ericom® Software Ltd.  
**Product Name:** PowerTerm® WebConnect  
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**Abstract:** *With over 70% of applications still run on host-based systems, terminal emulation is a pervasive technology within private and public organisations. The growing requirement for thin client, remote and mobile access to host-based systems is leading the transition from traditional terminal emulation to browser-based Web-to-host access. Also organisations are being compelled to deliver information, not just to their employees, but to suppliers, business partners and customers. PowerTerm WebConnect from Ericom Software provides both thin-client and fat-client solutions in a single package, both of which can be administered from the same centralised management interface. PowerTerm WebConnect offers a wide range of emulations, powerful Secure Sockets Layer (SSL) driven security and a host session shadowing capability for remote support.*



### The Terminal Emulation Market - Web to Host

There is a tendency in this day and age to think of terminal emulation as being a legacy technology, but the reality is very different. Over 70% of applications still run on host-based systems, and the number of users who require remote or mobile access to enterprise applications is growing rapidly.

With the Web browser becoming the standard interface for so many applications, it is logical for access to host-based systems to follow suit, and the Web-to-host approach is expected to replace the traditional terminal emulation solution as the dominant presence in this market. Although anticipated adoption of Web-to-host solutions has been slower than previously predicated, current forecasts predict that this market will grow from \$240 million worldwide in 1999 to \$1.35 billion by 2003.

The next two years will see a rapid growth in the adoption of wireless devices and Personal Digital Assistants (PDAs) in the enterprise. There is also a continuing rise in the number of workers requiring remote access from branch offices, home, and customer sites. Butler Group believes that these drivers will see the market for Web-based terminal emulation achieve significant growth as access to host-based systems becomes increasingly distributed.

Provided that security controls are in place, Web-to-host connectivity also provides a route to rapidly Web-enable an organisation's supply chain, by giving suppliers and customers controlled access to business systems. In many cases, it is the deployment of the application to business partners that is the barrier to supply chain integration, and this is why a browser-based solution fits the bill. Firstly, the technology is ubiquitous and simple – a Web browser is available at every desktop; secondly, the communications infrastructure – the Internet - is already in place, and is available at low cost.

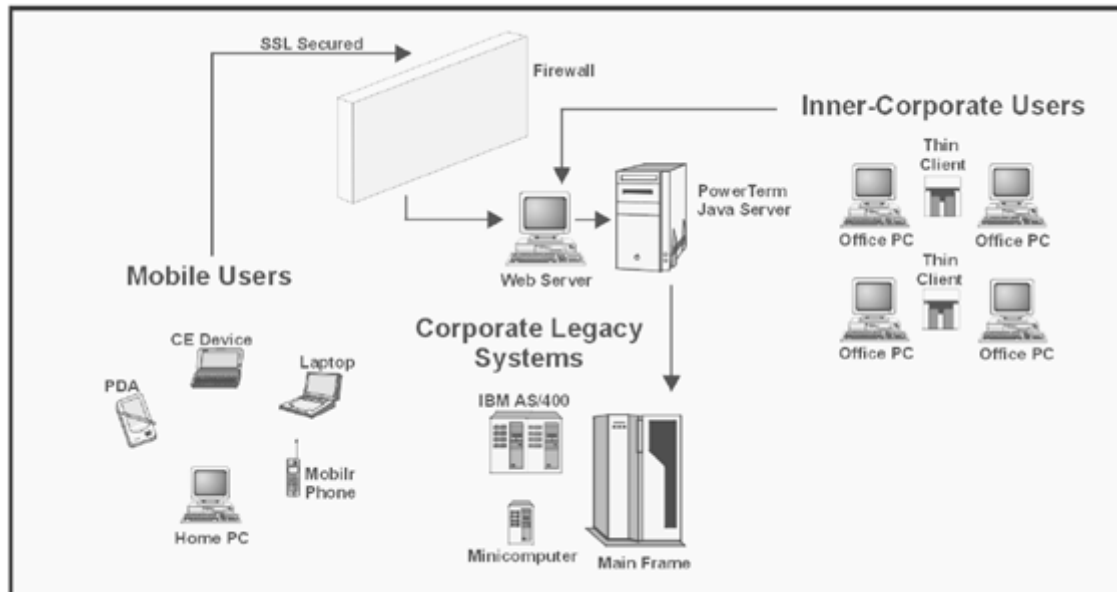
Successful deployment of Web-to-host access depends on good management of the solution, including set-up, installation, security and support. This is particularly true as the range of devices used for access diversifies, and a robust central management capability is needed to maintain effective control.

PowerTerm WebConnect from Ericom Software is a browser-based Web-to-host connectivity solution that is targeted at this market, and which offers key benefits in the management of host-access within the enterprise. Ericom has a solid reputation in the terminal emulation space, having specialised in this area throughout its seven-year existence. Ericom's products are marketed under the PowerTerm brand, and are known for having a small footprint (i.e. they are compact in size), a powerful yet flexible interface, and a broad range of emulations.

**PowerTerm Technology**

PowerTerm WebConnect is the most recent addition to the PowerTerm suite of connectivity solutions. PowerTerm WebConnect combines Ericom's proven core emulation engine with the latest in Internet software development tools to create a browser-based terminal emulation solution, which has been optimised for performance and reliability.

With browser-based software there is always the issue of whether to use a thin-client model with the application residing on the server, or a fat-client scenario where the browser downloads the application to the client machine.



The external connection from the PowerTerm Java client (running on the public network) to the PowerTerm server (deployed on the private network) is secured via SSL. The connection from the PowerTerm server to the host is secured by the corporate intranet firewall, which eliminates the need to install patches on the host in order to support secure connections.

With PowerTerm WebConnect, Ericom offers the best of both worlds, as the package includes both thin-client (ideal beyond the firewall, Java client) and fat-client (inside the firewall, ActiveX client) versions of the product, at no additional cost. The corporate IT Manager or the user themselves (security permitting) can choose which version to install for each user, group of users or scenario.

The Java based thin-client is ideal for remote users, mobile users, casual users and third parties who are outside the company firewall. The Java applet has a very small footprint, around 200Kb, and downloads and self installs on demand very quickly, which is important for low-bandwidth connections. It also needs minimal memory resources, offers a secure connection to the host since it supports Secure Socket Layers (SSL) and is managed completely from a central console.

The fat-client option of PowerTerm WebConnect is implemented as an ActiveX control and is optimised for LANs and WANs. This would be downloaded to the client on first usage, stored in the client, and thereafter updated only when a new version is installed on the server. For users on an internal network, this option provides better performance than a JAVA-based thin-client, since the client is then communicating directly with the host. However, the IT department can still centrally manage licensing and user set-up identical to the JAVA thin client option.

Since both the thin and fat clients are seamlessly integrated into the PowerTerm WebConnect license and management functions, the IT department can intuitively manage and select the most appropriate client type. This interface provides administrator control over host access from a single point, providing facilities to configure users individually or on a group basis. Permissions can be granted for particular hosts, and a user can be restricted to pre-configured sessions, or can access available sessions as required. This same interface displays a list of all sessions that are currently active, allows the administrator to monitor network traffic, and terminate sessions when appropriate.

PowerTerm products support a wide range of emulations – supported platforms include IBM mainframes and AS/400; Digital VAX/VMS, Alpha and OpenVMS; Data General; SCO and generic UNIX systems. Terminals emulated include IBM 3270 and 5250 series, Digital VT series, ANSI terminals, Data General 200 and 400 series, Wyse 50/60, Televideo TVI 925/950 and AIXterm. PowerTerm also supports some of the less common emulations such as HP3000 and Tandem.

For remote access to host-based systems, security is an important consideration, and PowerTerm WebConnect addresses this in both the thin- and fat-client options, by using the Secure Sockets Layer (SSL) security protocol for communication between the browser and the PowerTerm server. This enables users to work in a secure environment over a public Internet Protocol (IP) network such as the Internet. By employing this model with PowerTerm WebConnect the organisation has the additional benefit that the data itself does not leave the organisation, bearing in mind that only the terminal displayed information is being transmitted to the client. This is an important factor for applications such as healthcare, where patient records can be accessed without having any sensitive and private patient information stored locally on a client computer, such as a laptop, which could be stolen.

PowerTerm WebConnect also provides the IT administrator with the ability to provide remote support by providing a session shadowing facility. This works in a very similar manner to remote control products such as PC Anywhere: the user can request, and/or the administrator can initiate, a duplicate host access session to be displayed on the management console. Either party can interact with the host session, which is displayed on both screens simultaneously, whether these are in neighbouring offices or on opposite sides of the world. There is also a facility to exchange real-time text messages through a 'chat' interface, to assist with communication between the participants. This shadowing facility has real benefits to offer for remote support, enabling the administrator to provide meaningful assistance, knowing exactly what the user is seeing on their screen.

PowerTerm WebConnect supports a wide range of different languages, and has a graphical 'drag-and-drop' keyboard mapping system. This allows users to see on the screen a diagram of the terminal keyboard being emulated, and the PC's own keyboard. Keys can then be mapped simply by dragging and dropping the relevant function from one diagram to the other. Comprehensive print support is also provided, for example, auto print mode, screen printing, and slave printing.

**Market Strategy** Terminal emulation is a well-established market, and new sales are driven from a number of sources. These include a need for additional licences for new users at an existing site, (often following mergers or acquisitions), and a customer's desire to standardise on a single vendor solution to their terminal emulation requirements. These factors have tended to result in the maintenance of the status quo, with traditional terminal emulation technology remaining prevalent over Web-to-host solutions.

Two technology shifts will move this bias towards Web-to-host solutions: firstly the requirement for host access from wireless devices, and secondly the expansion of the Web-enabled supply chain beyond the boundaries of the organisation. The small footprint of PowerTerm products lends itself particularly well to the wireless/handheld market where memory is limited, and PowerTerm CE was the first browser-based host access solution to be released for the Windows CE platform. Subsequently, Ericom has been able to capitalise on this and its CE product is now included as standard, under an OEM agreement, by many Windows Based Terminals (WBT), such as those from Acer and Teco. A Windows-Based Terminal (WBT) is a thin-client device that typically uses Windows CE, and connects to a Windows NT Terminal Server host.

Ericom's experience with handheld and wireless devices has shown it that traditional character based terminal emulation is workable with screen sizes of 320 x 480 and above (i.e. half the resolution of a standard VGA screen). Below this size, delivering a host-screen to the device becomes too cumbersome, and alternative Web-based approaches are more suitable.

End-user licences for PowerTerm WebConnect are sold exclusively through Ericom's network of resellers, System Integrators and Corporate solution providers. Ericom also works closely with a number of Independent Software Vendors who offer market-specific solutions incorporating the PowerTerm software. More recently, Ericom has been selected by PSION as a technology partner to deliver its PowerTerm WebConnect solution in conjunction with their new Java based netBook and Tablet devices.

An important component of Ericom's marketing strategy is its approach to licensing. Firstly, PowerTerm WebConnect is licensed on a concurrent session basis – i.e. the customer need only buy a licence for the maximum number of sessions that will be active at the same time. Secondly, Ericom is moving towards a model where all PowerTerm products are combined for licensing purposes, so that administrators do not need to worry how many users will be using browser-based access on a PDA, and how many will use traditional emulation from a PC or CE device. They will simply purchase sufficient PowerTerm licences to cover their overall concurrent host-access requirement. This is helpful when planning future strategy, as the transition to Web-based and wireless modes of working can be made gradually without worrying about re-licensing.

In addition, Ericom is keen to assist their customers and provide solutions, which make it easier during periods of change. One example of this is Ericom's innovative addition to their PowerTerm WebConnect product, embedding an ActiveX control into the Graphical User Interface (GUI). This provides an extra dimension to their Web-to-host solution. For instance, this enables the terminal emulation functionality to be delivered alongside other components: an example might be a Customer Relationship Management (CRM) system where access to a legacy, host-based billing system could be embedded alongside a delivery tracking application written in Visual Basic.

### **PowerTerm® Host Publisher**

Ericom Software also produces solutions for integrating host-based systems, data and applications together with modern Web-based applications. Ericom has developed a product called PowerTerm Host Publisher, which uses Java-Beans and Microsoft .NET technologies to deliver the desired host-based applications, processes and data, through the creation of dynamic Web pages. This allows companies to integrate legacy applications into a Web environment without changing the original host application and provide both Web and wireless access.

Ericom's PowerTerm Host Publisher is a software product, which provides the tools necessary to integrate applications and create a whole new generation of web enabled 'virtual' applications leveraging the organisation's legacy assets. Organisations can fully incorporate existing enterprise business applications into their e-business strategy and infrastructure.



## Vendor Profile

Ericom Software is a leading provider of corporate connectivity, e-business, wireless, business to business and Enterprise Application Integration (EAI) solutions. These solutions extend the life of host systems by creating Web/WAP applications from existing host resources – without having to modify the original legacy applications. Ericom develops, markets and supports a complete line of interconnectivity software products including the PowerTerm Series of terminal emulators. Ericom's advanced host and remote access products enable organisations to securely, efficiently and cost effectively connect to any host, anytime, anywhere.

Ericom's clients include organisations such as AT&T, COMPAQ, Carphone Warehouse, Harvard University, Hitachi, Intel, Merrill Lynch, Motorola, Rentokil, TECO, and NASA. The company's share of the host access market worldwide is approximately 9%.

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