

Technology Infrastructure

Butler Group Subscription Services

Thin Client TECHNOLOGY AUDIT

Wyse Technology Winterm

Abstract *Wyse Winterm terminals offer an attractive alternative to the 'fat client' PC on many desktops. Organisations face the constant hail of virus attacks, the need to reduce costs, achieve quicker deployment, and improve manageability. Wyse Winterm thin clients have benefited from years of development and a maturing infrastructure. In the past, Wyse struggled to convince the world to 'go thin' because many PC overheads are hidden and buyers failed to appreciate the Total Cost of Ownership (TCO) arguments that document the economic advantages of thin clients. However, the company is now introducing new hardware and software products that will enable it to reach a wider market. Butler Group believes that Wyse Winterm offers a viable alternative to the desktop PC for many, making access to business data and applications easy, secure, and affordable. Its new PC Lockdown facility will allow organisations to evaluate the benefits to be gained by a wider deployment of thin client desktops.*

<p>STRENGTHS</p> <ul style="list-style-type: none"> • Provides easier management of desktops. • Easy back-up of secure server-based applications and data. • Greater system reliability, security, and low maintenance costs. • High expected return on investment by low Total Cost of Ownership (TCO). 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • User reluctance to change from using familiar PCs. • High-end graphics or moving environments are difficult to translate into thin client protocols.
<p>FUTURE POTENTIAL</p> <p>Butler Group believes Wyse has great potential with its Winterm offerings. There will be a growing trend in the use of low cost thin clients over the next few years as organisations acquire fitness for purpose tools on the desktop. Wyse has now broadened its product family, not merely with hardware, but also with management software that will demonstrate the efficiencies to be gained from the increasing use of Winterm in the IT environment.</p>	

► FUNCTIONALITY

The problems facing organisations in achieving cost reduction, increasing security, quicker deployment, and improved manageability has led them to search for centralised control of their IT systems. Server centric architectures offer an attractive alternative to the installation of a PC on every business desktop.

Thin clients allow organisations to get the most out of such an architecture by giving users easy and affordable access to their server-based applications and data. Thin clients combined with the server centric architecture enable the key benefits of Total Cost of Ownership, security, reliability, flexibility, manageability, and control to be realised.

Wyse has been a pioneer of thin client technology and its Winterm terminals are small, simple, and inexpensive devices that can operate in any of these environments:

- Terminal/Server utilising Microsoft Windows 2000 with RDP protocol or Citrix MetaFrame with ICA protocol.
- HTML or Java using a built-in Web browser.
- Legacy green screen using built-in legacy terminal emulation.

The thin client model is an alternative to client server or so-called fat client architectures. Although thin client computing has a smaller installed base than client-server, it overcomes many associated drawbacks. With data and applications residing on the server, administration and control are much simpler.

Thin client deployment can cut costs, particularly software maintenance and upgrade overheads. In addition, access and data security are more robust, and routes for virus/worm attacks are limited. Fat clients, also known as PCs, can also be centrally managed, though they are comparatively complex and expensive to maintain. Issues arising from the actions of PC users consequently create time-consuming support burdens.

To the user, an application on a thin client device appears identical to one on a familiar PC, yet thin clients eliminate the management problems that PC administrators face. Device reliability is improved because there are no moving parts, and network utilisation is less intense than with the client server model.

Wyse characterises its current product line as offering the users choice of simple, powerful, or flexible devices in price bands to match the functionality required.

Product Operation

Wyse offers a wide range of thin client models, which span user requirements from low-cost devices to highly expandable terminals. The low-end Winterm 1200 incorporates Wyse's own Blazer (BSD-based) client technology that delivers extremely high performance, which is said to be the equivalent to an 800 MHz Pentium running Citrix ICA. This model requires minimal set-up, but does not include a local Web browser. It starts at a price of £199/€329/US\$299 plus VAT, and includes Rapport management software.

The next highest on the power scale are the Windows CE-based devices, the Winterm 3000 series, which include Internet Explorer technology. At the high end are the embedded NT or XP Winterm 8000 and 9000 models. In addition, the Winterm 5440XL has the SUSE Linux operating system.

The options available at various levels include monitors and input-device selections, IO capabilities, software modules, and memory to suit the intended application.

Wyse Rapport™

Wyse Rapport™ management software enables administrators to centrally manage and control their thin clients desktops. Facilities include:

- The collection of terminal information such as serial, IP and MAC address numbers, even if a terminal is switched off.
- The ability to group terminals into logical areas, such as by department or geography.
- The upgrading of terminal firmware by logical group.
- The addition of terminal connections or change settings.
- The addition or changing of local software drivers.
- Viewing audit trails of all terminal changes.
- Shadowing user screens to provide support.
- Performing terminal diagnostics.
- Writing and executing change and asset management reports.

Thin clients are terminals that run a base operating system with additional software modules for the various clients involved such as ICA, RDP, and Web browser, in order to access through the network server-based applications. Data and applications are stored and executed on the server. The thin client only sends to the server keyboard and mouse entries, and displays locally the remote application.

Global Fortune 50 companies and 50-employee small businesses can benefit from the effectiveness and efficiencies of server-based computing. The Enterprise edition of Wyse Rapport management software scales up to tens of thousands of devices. This is achieved through the use of SQL Server and a multi-threaded architecture. This allows many terminals to be upgraded concurrently. The limiting factors are the bandwidth of the network, and the Rapport server capacity.

Latest Additions to Wyse Technology's Product Range

Wyse has studied the market requirements and is about to release a range of new products that broadens its market appeal. These are:

- A rich mobile vertical terminal that addresses the increased market requirement for mobile facilities. This is a fully featured XGA tablet, a Windows CE-based wireless portable, with access to server-based applications through ICA, RDP, local browser, and text emulations.
- A wireless SVGA horizontal tablet with remote desktop capability of Windows XP with simplified set-up, operation, and management.
- Rapport 4.0 will incorporate over 50 new features, a new pull architecture, and scalability up to hundreds of thousands of devices.
- PC Lockdown will allow customers to build a migration strategy to server-based computing for their existing desktop assets. This software solution will provide sophisticated levels of lock-down, remote management capability for PCs, near thin client security, and management.
- Server optimising software will increase terminal and server capacity by 30% to 35%. It will operate with Citrix, Microsoft, and New Moon servers. Wyse asserts that this optimisation will enable customers to make significant improvements in response times, and reduce the need to upgrade their hardware.

Product Evaluation

Butler Group believes that Wyse has developed a credible alternative to PCs. It is now broadening its offerings to significantly expand its market appeal to prospective customers. These should enable the thin client benefits to be more apparent, and help in gaining acceptance of the thin client message against organisational inertia. As Butler Group has previously stated, until this is overcome, the true potential of thin clients will not be conveyed.

► DEPLOYMENT

In the deployment of a Wyse Winterm solution, the main effort is required to build the server side component and network. Once this has been achieved, the implementation of the terminals requires much less skills than the support of PCs. The standard product includes the unit, keyboard, mouse, and Rapport management software, Workgroup edition. For integrated models, it is a complete desktop ready to connect to the network. These can be regarded as out-of-the-box as they can be quickly set up and added to the network using a simple wizard.

Technical skills are required for the server side set-up, but once this has been carried out, terminals can be deployed using DHCP attach-and-go. Most Winterm project installations are carried out by Wyse's network of VARs and SIs.

Winterm solutions can be deployed in a modular manner, and a thin client can be deployed in five to ten minutes if the network and server are set up correctly.

The Wyse Rapport management tool is delivered as standard with Winterm terminals. It enables the management and upgrading of firmware remotely over the network, or through a modem from a central location. An administrator can manage tens of thousands of devices from one location. They can be configured and have their firmware or settings updated or changed at any time, and in any order, by utilising flexible scheduling features.

The Rapport user interface is a Microsoft Management Console snap-in that has the look-and-feel of Windows Explorer. An administrator can transfer client software and settings using an easy-to-use interface whilst maintaining a comprehensive view of each client on the network. Thin clients can be grouped in whatever configuration the customer demands, and this simplifies the management and reporting. Rapport also provides software and hardware asset management.

To enable the management of many thousands of users in many locations around the globe, without bandwidth problems, Rapport Enterprise can be installed with multiple management consoles and multiple update repositories. This eliminates the need for local support teams to add, delete, or change application software, client firmware or user settings.

The company also supplies a two-day, in-depth technical training course on how to use the Rapport management product for technical systems administrators and desktop support specialists. This is provided at a number of global Wyse Rapport training centres, which are equipped with the latest thin client and software technology. The company plans to have additional Rapport training available on the Web in the near future. Ongoing support is provided via the Web and by telephone. Wyse has an automated support database that can be queried via the Web

To access server-based Windows applications, Wyse Winterm terminals require servers running operating systems such as Citrix Metaframe, Microsoft Windows 2000, or .NET Server. These operating systems contain a terminal services feature that allows applications to be hosted on the server and displayed remotely. The server runs the application, terminal services uses a protocol to send what the screen should look like to the client over the standard network, and the client displays the applications as if they were running locally.

Two common protocols are used to send the screen updates to the desktop, and the keyboard and mouse commands back to the server, one is RDP from Microsoft, and the other is ICA from Citrix Systems. Citrix also offers a software layer on top of the core Windows capabilities, and their MetaFrame® package is often a choice for companies that are setting up enterprise-level server centric computing.

The product runs on Microsoft RDP, Citrix ICA, and New Moon RDP and Rapport runs on Access, MSDE, or SQL Server databases. Winterm devices can be inexpensively equipped with biometric security sensors or smart-card readers in the event that password access control alone is insufficient. Organisations wishing to access browser-based applications, such as many ERP applications, can do so using the local browser in the terminal.

Security and business continuity are of increasing importance to organisations, and Wyse asserts that they are inherent in a Winterm infrastructure. As there is no data contained in the Winterm device, the loss of any device will not impinge on corporate security or business continuity. Defence against hacking and virus/worm threats can be concentrated at the server end, and it therefore does not depend on user compliance or workstation updates.

► PRODUCT STRATEGY

Wyse asserts that it is the market leader in thin client desktop devices and has more than 50% of the market. Its target market is reached through Wyse's channel of VARs and distributors. This is extended by its OEM partnerships with HP (Compaq) and others. The company sees Neoware as its key competitor in the thin client market.

The company provides free lifetime telephone support for Winterm thin clients. All the terminals are supplied with a one year warranty. For non-integrated units, without CRT or LCD screens, this warranty can be extended to three years when the product is registered for warranty within 90 days of purchase.

The purchase of Winterm hardware includes a Rapport Workgroup client licence. This can be upgraded by customers to the Rapport Enterprise Edition. Wyse's Rapport product has a support and maintenance programme called Rapport Priority Plus that offers:

- Unlimited telephone support from centres in US, Europe, and Australia.
- Web-based training.
- Bug fixes.
- Free upgrades to all future versions of Rapport.

This costs £4/€6/US\$5 per seat per annum for Workgroup Edition, and £8/€12/US\$10 per seat per annum for the Enterprise version.

The major competitive alternative to Wyse Winterm is the low cost PC. However, the European market is growing and Wyse sees no decline in the expansion, as the recession, concerns over security, and the spread of viruses foster the greater adoption of thin clients. Wyse expects a 50 % unit growth over the current year. Europe represents 30% of Wyse's global revenues.

The company is now extending its market position beyond desktop thin clients. This is being achieved through strategic initiatives focused on server enhancements, personal computer management solutions, mobile devices, and professional services. Through this expanded range of products and services, in conjunction with its strategic partners Microsoft® Corp. and Citrix® Systems, Wyse intends to maintain its thin-client market share lead and accelerate the growth of server-centric computing.

Wyse has a number of business and technology alliances with other companies including:

- Microsoft.
- National Semiconductor.
- Identix.
- Expand Networks.
- Netilla Networks.
- Citrix.
- Schlumberger.
- Insignia Solutions.
- Tarantella.

► COMPANY PROFILE

Wyse was founded in 1981 and has grown to be a global business with US\$180 million annual revenues. Approximately 10% of the company's gross revenue is spent on research and development. Its shares are publicly traded on the Taiwan Over-The-Counter Stock Exchange.

The company's headquarters are in San José, California, and it employs over 550 employees globally, with about 50 located in Europe. Production facilities for Winterm products are in Taiwan, and Wyse software engineering is carried out in the US and Taiwan.

Wyse sells its products indirectly through distribution channels, which are supported by a direct sales force for larger customers. It has shipped about 2 million Winterm terminals. Wyse reports that its products have been well received in most industry sectors, and its key clients include:

- The Royal Mail (UK).
- National Health Service (UK).
- ING (NL).
- ITS Reisen (Germany).
- Flight Centre (Australia).
- NBC (US).
- CarPhone Warehouse (UK).
- Swinton Insurance (UK).
- Eidgenössische Zollverwaltung (Switzerland).
- Sernam (France).
- FNAIM (France).
- Fedex (US).

Microsoft Embedded Systems Division has named Wyse the Partner of the Year for the last three years. Wyse will likely be a close observer of the unfolding .NET strategy as it relates to thin client computing. Wyse enjoys close links with Citrix as well, so its ability to compete strongly in thin client computing seems secure.

► SUMMARY

The case for thin client alternatives to PCs is becoming stronger. The products and the infrastructure are now mature. Organisations have much to gain in security, reduced support costs, and improved manageability by choosing the desktop product that is required to do the job. The implementation of a PC-replacement strategy in those functional areas where a thin client such as Winterm fits the requirement, can generate immediate savings.

Butler Group believes that Wyse's expanded product offering, now incorporating mobile and wireless terminals, together with enhanced management tools, can provide significant benefits to most organisations. Its new PC Lockdown facility offers an easy entry for companies to the thin client environment so that they can assess for themselves the benefits to be gained.

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