

Text terminals, thin clients or PCs?

Six arguments in favor of choosing text terminals when adding or replacing desktops

By Derek Holloway

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Summary

The text terminal is alive and well in thriving organizations – from giant retailers and banks, to hospitals and universities, to factories and yards. As businesses grow and expand, they frequently need to add desktops to support more users. IT staff may be asked to justify their decision to stay with text terminals rather than “upgrading” to thin clients (TCs) or personal computers (PCs) with terminal emulation. This justification is simple when one looks at the significant advantages that text terminals offer: simplicity, security, stability and longevity. These advantages add up to a return on investment that far exceeds anything that can be achieved by the other alternatives.

Contents

Six arguments in favor of text terminals.....	2
1. No firmware or software upgrades.....	2
2. Greater hardware reliability.....	3
3. Hardware model longevity.....	3
4. No user configuration corruption.....	3
5. Safety from viruses and data theft.....	4
6. More ruggedized and robust for harsh environments.....	4
Buying a text terminal: New or refurbished?.....	4

The text terminal is alive and well in thriving organizations – from giant retailers and banks, to hospitals and universities, to factories and yards.

In some cases, text terminals support new systems. For example, a leading point-of-sale (POS) solutions provider - one of the Top 3 in the RIS News annual benchmark survey for technology innovation - recently rolled out a new POS system utilizing text terminals for administration activities such as status monitoring and batch processing. Text terminals were chosen as the most simple and secure interface for these functions.

More often, terminals are used to support legacy systems. These systems endure because they are proven, secure and stable systems that support critical business functions. They often provide a competitive advantage, as well, providing the backbone and structure for unique business processes and containing a wealth of institutional knowledge.

As businesses grow and expand, they frequently need to add desktops to support more users. Occasionally they may need to replace old terminals that have finally run their course – often after ten or twenty years of use. IT staff may be asked to justify their decision to stay with text terminals rather than “upgrading” to thin clients (TCs) or personal computers (PCs) with terminal emulation. This justification is simple when one looks at the significant advantages that text terminals offer: simplicity, security, stability and longevity. These advantages add up to a return on investment that far exceeds anything that can be achieved by the other alternatives.

Six arguments in favor of text terminals

Here are six reasons that the text terminal remains the desktop of choice for legacy systems, and should be considered for new systems as well.

1. No firmware or software upgrades

Both TCs and PCs have a cost overhead and administrative burden stemming from the need to continually patch and upgrade software (operating systems, applications and utilities). This adds significantly to the cost of ownership. Not only is there significant time and expense involved in updating servers, but the desktop's useful life is limited by the updating requirements, since newer versions of software invariably demand more memory and/or processing power. This is a key reason that most organizations budget for a three- to five-year replacement cycle for PCs and thin clients. Additionally, businesses must budget time and money for user training as functionality and user interfaces change.

In contrast, systems based on text terminals are free from the update and patch cycles mandated by Microsoft, Citrix and other software providers. The server operating system and applications remain working in a proven environment. Text terminals can be added or replaced without concern for compatibility with Windows – official release or beta versions.

2. Greater hardware reliability

Terminals have no moving parts and are built to last, so their reliability is second to none. Ten years is a reasonable life expectancy, and it's not unusual for a terminal to continue to work 20 years after installation. Because there are no firmware upgrades, the terminal can remain 'undisturbed' for many years. Once installed, it's a rarity for them ever to fail to work.

PC and thin client manufacturers are driven by new product introductions, and expect users to replace these desktops with newer models on a three- to five-year cycle. As a result, they are not designed with longevity in mind. It is extremely rare for a PC or thin client to still be in use after 10 years.

3. Hardware model longevity

Not only does a text terminal continue to work reliably for many years, but the exact same models can be purchased for decades. The DEC VT-520 text terminal, for example, is still being manufactured with the same specifications as when it was introduced in the mid-1990s (and by the same company that manufactured it under OEM agreement for DEC.) This allows MIS managers to add desktops with the same appearance and functionality as the in situ models.

In contrast, PC and thin client manufacturers are constantly updating their ranges. They introduce new models as often as every three months, and obsolete models are usually removed from the websites, making comparison of new models to obsolete models difficult. Consistency of models purchased over a period of only a few years is virtually impossible.

With text terminals, adding or replacing desktops is a simple matter of re-ordering the same model. This eliminates the need to spend hours sourcing equivalent devices, testing them for compatibility and creating new configuration templates. It also prevents annoyances such as user jealousy issues when some users have newer and more coveted models, even though the older models perform perfectly well.

4. No user configuration corruption

Configuration management can be a nightmare with PCs, and even with TCs. Users can corrupt settings unless complex management control software is installed and maintained by the MIS department.

A text terminal is much easier to "lock down" so that users are prevented from changing the configuration or set-up. The terminal configuration is saved as a default template and downloaded to each terminal, much the same as for a PC or TC, but without the need for any special management software at extra cost. Minimal time is wasted with user down-time while the proper configuration is reinstated.

5. Safety from viruses and data theft

Viruses are a PC phenomenon. Thin clients (especially those running the XPe operating system) are also vulnerable. A text terminal does not have a local operating system to be corrupted, nor any input device such as USB slot by which users can introduce a virus into the system. Therefore the text terminal is the only device guaranteed not to get a virus.

Additionally, no data can be stored on a text terminal. This eliminates the risk of intentional data theft, as well as the accidental leaks that occur when users take home and lose laptops or USB 'pen' drives previously connected to a laptop or TC, containing sensitive data. Text terminals provide a far safer and more secure environment than either PCs or thin clients.

6. More ruggedized and robust for harsh environments

With no moving parts, the text terminal has proven to be particularly suited to harsher environments such as factories, warehouses and yards. With the build philosophy of longevity in mind, text terminals can better cope with dust, grime, moisture and dirty fingers. Terminal operators in these settings are less likely to be computer-literate, so that systems written for basic input provide the simplest and most efficient user interface. There is no need to boot up Windows, open applications, or respond to warning messages. The text terminal is ideal for this world.

Buying a text terminal: New or refurbished?

When buying a text terminal, users have a choice of new or refurbished hardware. The cost savings of a refurbished unit are minimal, making a new system the logical choice.

Warranty terms are typically one or two years for refurbished terminals vs. three years for new terminals. However, this extra one or two years of warranty is not the most important difference. The main advantage of a new terminal is the far greater expected lifetime after the warranty has expired. A refurbished unit may already be many years old, and its components may be nearing the end of their expected lifetime. For example, the electrolytes in capacitors will evaporate over time. A 15-year lifetime is usual but varies depending on temperature, actual hours used, and component type. With a new terminal, you get all new components – and maximum expected lifetime.

If you need more than one or two terminals, new text terminals are more likely than refurbished units to be available at the quantity and delivery schedule you need.

Finally, new text terminals are being manufactured in compliance with the RoHS directive that came into effect in 2006. You have no guarantee of this with refurbished units.

In their thirty year history, text terminals have endured as the most stable desktop device available, working with systems that have continued to deliver on their promise for many years. For locked-down user efficiency, there is nothing to compare with the clear, concise and well-defined functionality of a text terminal. The price/performance return on text terminals continues to make them the right choice for any legacy system and for many new systems as well.

About the Author

Derek Holloway is sole proprietor of Holloway Computer Products. He has 26 years of experience in sales and marketing of text terminals and thin clients, most recently as EMEA general manager and EMEA agent for Boundless Technologies managing distributors in the UK, France, Germany and the Netherlands. He has prior experience in distribution sales of DEC VT Series terminals and compatibles.

About Boundless Technologies

With an installed base of more than three million units, Boundless Technologies (formerly ADDS) is one of the world's largest suppliers of general purpose display terminals and workstations. The company has designed and manufactured private-label terminals for OEMs including IBM, HP, Compaq, AT&T, NCR and others.

Boundless continues to provide a complete line of new, factory-built text terminals including the ADDS and DEC VT and Dorio lines, with terminal emulation sets for every major text terminal manufactured in the last 30 years including all Wyse text terminals. In addition to traditional terminals with CRT display, the company offers compact "Littlefoot" terminals which support the user's CRT, LCD or specialized display.

Boundless Technologies was acquired by Video Display Corporation (NASDAQ:VIDE) in 2008. Manufacturing, sales and support of Boundless products are located at the company's Z-AXIS subsidiary, an ISO9001:2008 certified electronics design and manufacturing centre near Rochester, NY. Founded in 1989 to offer a unique line of rugged video display monitors, Z-AXIS has a long history of custom electronics design and high-quality manufacturing for commercial, medical, military and industrial customers.

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Find a reseller online at http://www.boundlessterminals.com/text_var.html.