

TECHNOLOGY AUDIT

IGEL Products











IGEL




BUTLER GROUP VIEW

ABSTRACT

IGEL has developed a range of thin-client devices that can support in a single device the current range of protocols used to deliver digital services to the desktop. Currently these digital services are provided using proprietary protocols, and when used on PCs they require complex implementation and configuration that slows down their deployment. Butler Group considers that the use of a 'smart card' reader in the devices extends the range of possibilities that these devices can be used for, from supporting mobile workers in a hot-desk environment, to a retail environment where managers have different authorisation levels, but need to use the same screen. Butler Group considers IGEL to be a relatively unknown brand within the UK, we believe it needs to be marketed more aggressively in terms of its business value, rather than its technical capabilities. IGEL products would benefit any organisation that wants to reduce its power consumption, consolidate the desktop devices (remove the need for telephones for example), and reduce its management costs associated with desktop devices. Thin-client technologies provide a viable alternative to a desktop PC in a number of different scenarios; education, financial services, or retail for example.

KEY FINDINGS

- | | |
|---|--|
|  A full version of the Remote Management Suite is included with the purchase of the product. |  Incorporated smart card reader provides true secure multi-user capability. |
|  Very rich set of digital services included in Linux versions. |  Very broad range of hardware form factors. |
|  Power consumption is 90% less than a traditional PC. |  Included in the range is a four-screen model that can simultaneously handle in real time data from four different sources. |
|  Operates on embedded Windows XPe, Windows CE, and Linux. |  Supports the concept of profiles making firmware updates quick and simple. |
|  The console of IGEL's Remote Management Suite runs in a JVM, making access easy from anywhere on the network. |  Brand image low outside of its home country of Germany. |

Key:  Product Strength  Product Weakness  Point of Information

LOOK AHEAD

IGEL is looking to use its core competence in thin-client technology to deliver digital service appliances to users from a single easy to manage and configurable device. IGEL believes that more and more digital services will be developed with their own proprietary protocols making deployment on traditional PCs a complex and time-consuming task.

Butler Group considers that IGEL is approaching the market from a sensible perspective, because as users demand devices to be capable of operating with a variety of different digital services (consider the mobile telephone) they (the users) are looking for a simple way of re-configuring the devices for reuse dependant upon prevailing business imperatives.

FUNCTIONALITY

Thin-client solutions provide organisations with a cost-effective method of deploying computing to remote or branch offices, while retaining control of the costs associated with maintaining the equipment. The advantages of thin client especially in terms of security are well documented, as having many PCs to protect is a time-consuming task, whereas in a centrally-managed server environment this is significantly reduced.

However, Butler Group believes that the emergence of digital services is forcing organisations to reconsider how it manages these on the desktop. We believe that the emergence of these digital services will create a second age for thin-client technologies. Consider the call centre for example, a call centre agent needs a telephone, access to a wide range of software applications (to log the call, and then perform some investigation), and possibly access to a multi-media library providing information so that the call can be successfully answered. Providing all this capability on the desktop requires a powerful PC, which generates heat and consumes a significant amount of power, and more importantly these digital services typically have proprietary protocols that require the PC to be configured for each service.

IGEL has developed a range of devices including a four-way split screen thin-client device that can display in real time four separate and independent information sources, as well as a wireless mobile thin-client device. The most obvious advantage is the energy saving that thin clients will provide, but as the number of digital services continues to increase and be delivered using proprietary protocols, then configuration and management of the receiving devices will become a significant task and cost to any organisation.

Product Analysis

Traditional PCs are becoming more powerful in terms of the processing capability, this is driven by the applications that are executed on them demanding increased resources such as memory and processing power. This increased performance consumes a significant amount of power, generates noise and heat, and requires a significant foot-print on the desktop, which makes optimising floor space more complex and costly. When the management cost of PCs is also taken into account the total cost of owning these assets becomes significant for even small organisations.

IGEL has a range of thin-client devices that operate with embedded Microsoft Windows CE and XPe or Linux. These devices can be centrally controlled using Remote Management Suite (RMS), which is provided free with every device. Because the devices use low power components and have no rotating media, they do not require fans to disperse heat. IGEL states that the power saving between a 20W IGEL device and a standard PC over three years is equal to the cost of the IGEL device.

By deploying IGEL thin-client devices in conjunction with a centralised-server consolidation and virtualisation strategy, organisations are able to realise significant benefits in terms of asset management, power savings, and flexibility of asset use. Butler Group considers the use of smartcard technology that is included as standard in most IGEL products provides added benefit to organisations. We believe this is specifically useful in the area of security and multi-user devices, i.e. in a retail environment the area sales manager is able via the smartcard to have a different set of applications to the store manager, thereby allowing mobile workers to be productive even when they are not at their 'home' location.

IGEL considers that the support for the different protocols and therefore digital services, such as RFID, and VoIP, as a significant point of difference between it and the competition. Butler Group agrees with this perspective, and would add that the capability to add or remove these digital services using the RMS means that devices remain productive for longer, therefore reducing the Total Cost of Ownership (TCO) of the device, as life expectancy is extended beyond that of a traditional PC.

Currently the RMS requires the application and database to be installed on a server and the client console is accessed via a JVM. This allows administrators to access the management console from any JVM device, such as a PC or terminal, located on their network.

Butler Group believes that IGEL has an excellent product that is redefining how users access the growing number of digital services being produced to resolve business issues. We believe that like the mobile telephone, consolidation of use on devices will accelerate, which requires organisations to be able to implement and deliver these services quickly and easily. Ultimately these services can be value-added services that are pay-as-you-go, again similar to the mobile telephone example, which represents the market that IGEL is looking to move towards as its business model in the future.

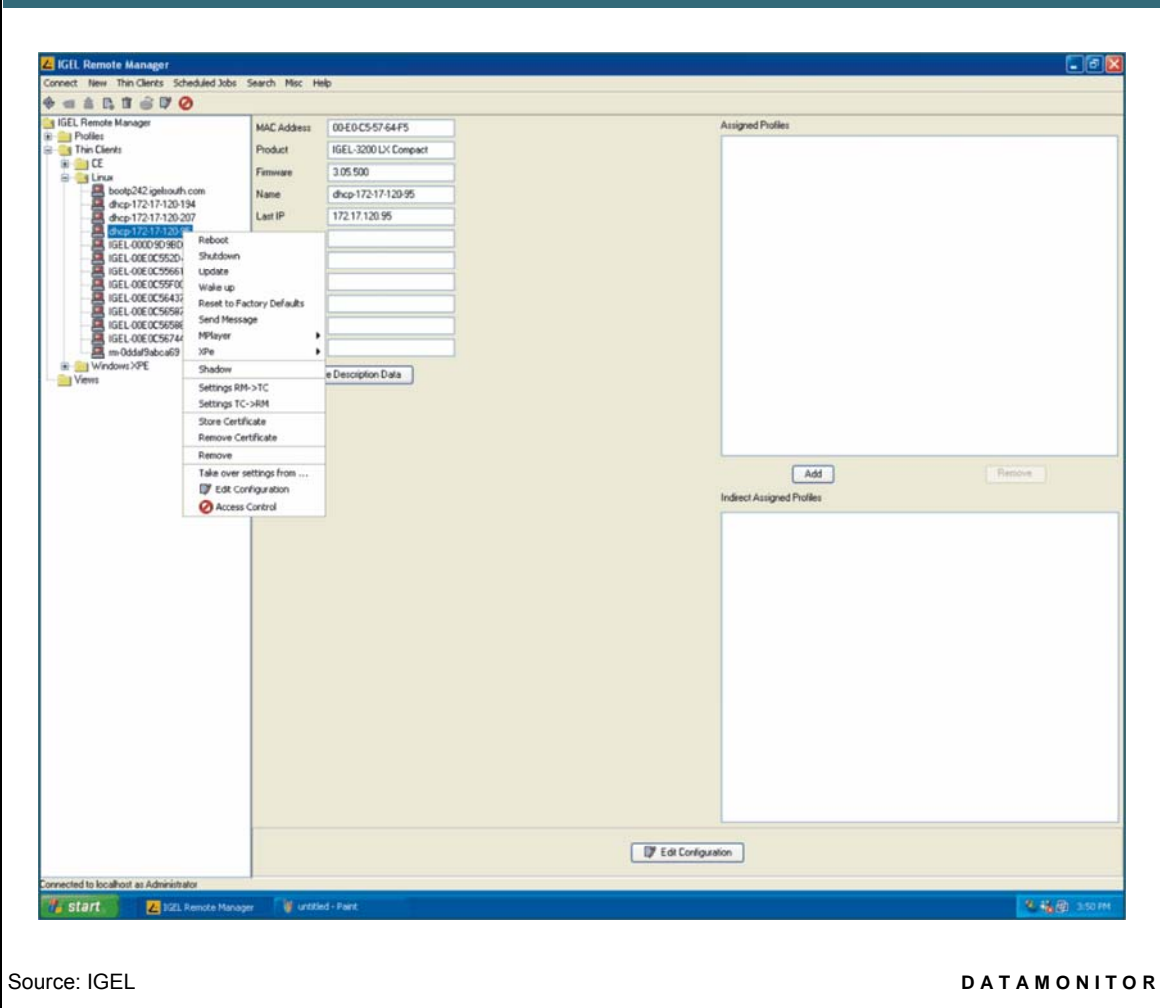
Product Operation

IGEL products are effectively 'black box' solutions as far as the user is concerned; they have a screen, keyboard, mouse, and small desktop unit, which they logon to as if it were a traditional PC. The only noticeable difference is that most devices have a smartcard reader slot, which enables users with a smartcard to insert it to launch connections to different digital services, and strongly authenticate themselves. However, certain terminal settings are hardware dependant only, such as keyboard language, which is not re-configurable using the smartcard.

The RMS supplied with every product is the method used by IT departments to manage the estate of thin clients, and ensure that organisations are getting value from its investment. Figure 1 shows a typical RMS screen. The left-hand panel is configurable by the user and shows all the devices grouped in the categories defined by the user. Figure 1 shows the actions that can be applied to an individual device or group of devices, this action can be scheduled or performed in real-time. These actions include:

- Reboot to force a change to take effect such as a new security patch.
- Shutdown and Wake up used for power saving and to ensure that when users arrive in the morning the terminals are ready for use.
- Send message so that remote-support users can inform users of problems or obtain more detailed information.
- Shadow, see Figure 2, where the remote user can see the full screen of the device being shadowed and take control to resolve any issues.

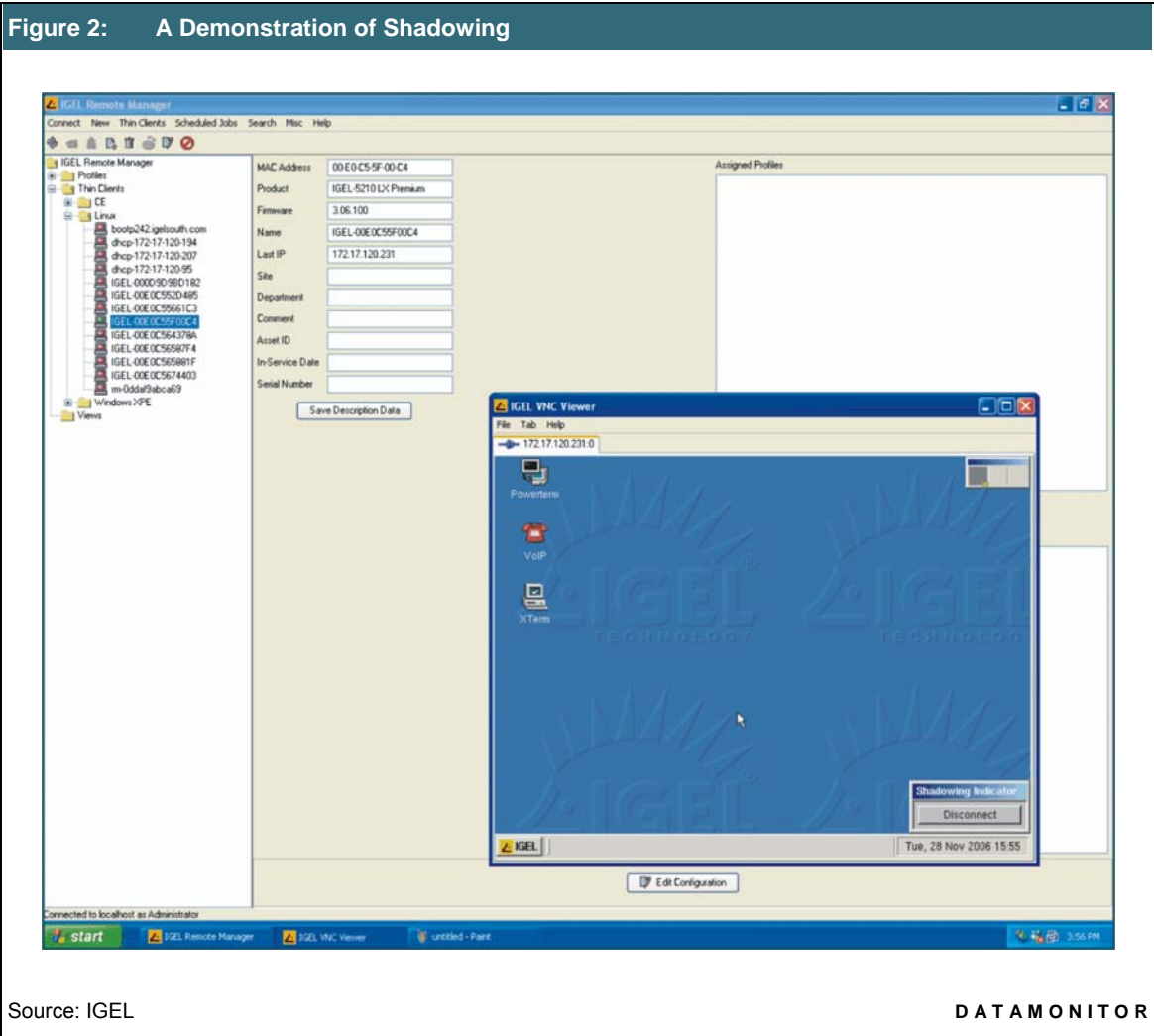
Figure 1: IGEL Remote Management Suite Typical Screen



Source: IGEL

DATAMONITOR

If the preparation work is done, then each IGEL device can be auto-detected and allocated to the relevant category, for example, if the IP address is 192.168.20.xxx then it is in the marketing department at the London office. Figure 1 also shows the information captured on devices and the ease with which devices can be assigned profiles. Butler Group considers the use of profiles as very useful, because a profile can be cloned and deployed to other devices rapidly, thereby allowing organisations to re-configure devices to match the business demand.



Product Emphasis

IGEL is on a long term journey to re-define the thin-client market. Its aim is to provide digital-service appliances that provide organisations with device consolidation and mid-life re-deployment opportunities. Currently the thin-client market is in a state of flux, with many vendors not having a clear vision of what business value the technology can delivery over and above the already documented security and management savings. IGEL, by focusing on how the hardware can become a compatible device, has turned the normal convention of a software pervasive world on its head. IGEL is providing the equivalent of a television that operates with any digital service provider.

DEPLOYMENT

IGEL can be installed by any in-house IT department in five minutes; however, the preparation required to support this requires the following steps to be performed prior to the installation:

- Configuration of the IGEL RMS so that clients can be connected quickly and managed over the WAN. This is achieved by assigning terminals a profile on first connect, so that the right settings and server connections are automatically established.
- The servers hosting the digital services such as Citrix, Radio And Pictures (RAP), and VoIP have been configured and are operational.
- The network infrastructure has been configured using either DHCP tags or DNS so that terminals can quickly find the IGEL RMS server automatically.

IGEL operates a tiered approach to support with the first point of contact being the Value Added Reseller (VAR); these VARs have access to IGEL.com and the knowledge base, if the problem cannot be resolved by either of these options the problem is passed to the support engineers in Bremen, Reading, and Ft Lauderdale. If the problem cannot be resolved at this level it is then passed on to the development engineers in Augsburg.

IGEL states that no training is required for end users, and that only system administrators who are using the RMS to manage the estate of thin clients require training, which only takes a day to complete.

The IGEL thin-client devices are available under Linux, Windows CE, and Windows XP. The IGEL RMS runs on Windows Server or Linux and supports SQL, Oracle, and DB2 databases. Out-of-the-box RMS comes with a free version of SAPDB.

IGEL is not dependant upon any other product, and traditionally suffers from the single point-of-failure argument. Effectively any thin client is dependant upon the network, if this is not available the device is useless, but today networks are constructed with high degrees of resiliency and rarely become completely unavailable; more likely a service is present but at a reduced performance.

PRODUCT STRATEGY

IGEL states that its products can be used universally across all verticals, although some verticals have specific requirements that thin-client technology readily addresses:

- Retail where a large number of small remote locations require access to central systems, typically the support costs associated with deploying PCs in such a geographically diverse environment is high.
- Healthcare where data security is a paramount concern and having PCs with local disks represents a risk of many disparate data sources.
- Transport where the operating environment is more industrial than office, which requires PCs to operate in temperature extremes or dusty conditions.
- Finance, which has requirement for multi-channel displays in dealing rooms, for example, and is concerned about data security.
- Lower Education where the device must be capable of operating in environments that require a robust resiliency to accidental misuse, i.e. child proof.
- Higher Education where the device must be secure enough to operate in environments that are exposed to intentional attempts to corrupt the PC, i.e. PhD hacker proof.

According to IGEL, thin clients are now penetrating all vertical markets, and can be found in organisations down to even the ten-user level. In the future IGEL states that it will start to target new markets:

- Device consolidation opportunities where organisations can save money on hardware purchases and have one management tool.
- Niche markets such as mobile users (para-medics) and multi-screen environments.
- Applications with no user (digital advertising).

IGEL distributes its products exclusively through the channel. The channel is supported by IGEL sales representatives for key accounts. IGEL is the founding member of the European Thin Client Forum, and leads the server-based computing and thin-desktop division of Bitcom, Germany's IT industry association. IGEL is a Citrix Premium Alliance Partner, a Microsoft OEM customer, and a business partner with VIA.

All software licence costs are built into the hardware product cost, including the IGEL Remote Manager Suite, which includes a free database licence (SAP DB). Over the next 18 months, IGEL will be continuing rolling out the strategy with:

- The addition of new services, such as connection to server-based, virtualised desktops.
- Rich digital services that can be accessed in a modular way (unlocked when needed).
- Improved secure access (biometrics and RFID).
- Use of the Web to improve manageability.
- Breadth of product line.

IGEL operates a release strategy that includes a major upgrade every 16 months. This strategy is linked to both the chip manufacture VIA, and Microsoft's roadmaps.

Butler Group believes the thin-client market to be in the pre-consolidation phase, currently there are a large number of vendors, but with only two of the big three chip manufactures (VIA and AMD) currently active. We consider that the innovative vendors such as IGEL will create a new market, and if this becomes a widely adopted technology then consolidation and new entrants will re-shape the vendor landscape. However, Butler Group does not believe that this situation will arise imminently; rather we predict this will happen within five years dependant upon the user adoption of next generation thin-client devices.

COMPANY PROFILE

IGEL is headquartered in Bremen, Germany, which is responsible for sales, support, and logistics. Research and Development is centred in Augsburg, Germany. IGEL also operates in four other locations Reading, UK, Hong Kong, Singapore, and Fort Lauderdale, USA.

IGEL started in 1988 as a division of the Melchers trading company distributing UNIX server systems and terminals. In 1996, it took over the master distributor agreement for IGEL terminals and in 1997; it developed its first Citrix thin client based on Linux. In 2001, the division was made a separate daughter company, IGEL Technology GmbH.

The company grew rapidly on Linux (the number 2 Linux vendor in thin clients in 2005) and then introduced Windows CE in 2003 and Windows XPe in 2005. IGEL became the world number 4 thin-client vendor in 2006, and became the number 1 vendor in Germany with a 23% unit share and 29% revenue share — Germany is the second largest thin-client market in the world after the United States.

IGEL is a profitable and stable part of the 200-year-old Melchers group in Germany. Unlike many competitors, it has grown organically (by design). This Germanic philosophy and private ownership has resulted in a very stable and well-integrated product set, and has enabled IGEL to focus its research on the next generation of thin client technologies and capabilities.

The company has 80 employees: (Bremen HQ 36 and Augsburg R&D 26), USA (Ft Lauderdale 11), and UK (Reading 7). This represents 33% R&D, 5% marketing, 33% sales, and the remainder in administration and operations. IGEL quotes the following key clients:

- Over 100 different German Sparkassen (savings banks).
- Barmer Ersatzkasse (health insurance Germany).
- United Rentals (USA).
- University Maastricht (NL).
- Plus (Tengelmann Retail Group, Germany).
- Les Schwabb Tyre (USA).
- CSK (USA).
- Allied Carpets (UK).
- SwissPort (Ch).
- Commerzbank Leasing (Germany customer since 1999).

SUMMARY

IGEL has developed an excellent set of products that enable organisations to use the new and expanding digital services on a single desktop device that are becoming common place in business use, services such as VoIP for example. Thin-client technologies represent an important segment of the market, and produce valuable solutions to some key business challenges. IGEL is a well-established vendor in this market, but is a thought-leader in terms of the future direction that the market is taking. Butler Group agrees with IGEL that users will expect desktop devices to become multi-function products capable of handling the increasingly diverse array of tasks, digital services, and proprietary protocols.

IGEL's products' address the increasingly complex issues facing IT managers of deploying desktop devices that can be re-configured quickly and easily as the demands of the business dictates. IGEL's solutions' also add value to organisations by rendering the device 'theft resistant': because it is not a PC and requires a central server to operate, hence thin clients are not targets for criminals. Butler Group considers the IGEL products an excellent set of devices and we particularly like the use of smartcards making the device truly multi-user and multi-functional.

Table 1: Contact Details	
<p>IGEL Technology GmbH Schlachte 39/40 28195 Bremen Germany Tel: +49 (0) 421 1769 – 240 Fax: +49 (0) 421 1769 – 302 E-mail: info@igel.de www.igel.com</p>	<p>IGEL Technology Limited 1210 Parkview, Arlington Business Park Theale, Reading, RG7 4TY UK Tel: +44 (0)0844 800 9016 Fax: +44 (0)870 351 4523 E-mail: info@igel.com</p>
Source: IGEL	DATAMONITOR

Headquarters

Europa House,
184 Ferensway,
Hull, East Yorkshire,
HU1 3UT, UK
Tel: +44 (0)1482 586149
Fax: +44 (0)1482 323577

Butler Direct Pty Ltd.

Level 46, Citigroup Building,
2 Park Street, Sydney,
NSW, 2000,
Australia
Tel: + 61 (02) 8705 6960
Fax: + 61 (02) 8705 6961

Butler Group

245 Fifth Avenue,
4th Floor, New York,
NY 10016,
USA
Tel: +1 212 652 5302
Fax: +1 212 202 4684

Important Notice

This report contains data and information up-to-date and correct to the best of our knowledge at the time of preparation. The data and information comes from a variety of sources outside our direct control, therefore Butler Direct Limited cannot give any guarantees relating to the content of this report. Ultimate responsibility for all interpretations of, and use of, data, information and commentary in this report remains with you. Butler Direct Limited will not be liable for any interpretations or decisions made by you.

For more information on Butler Group's Subscription Services please contact one of the local offices above.

