



“Our goal is to bring information and communication technologies (ICTs) to 45,000 schools by 2010, and they will serve about 60% of 2.7 million students”

-Ronaldo Mota from MEC

Brazilian Ministry of Education

World's Largest Virtual Desktop Deployment - 523,400 Stations

Overview

When the Brazilian government set out to expand computer access in its schools, they had a broad and important set of goals. Based on the knowledge that improved computer access in K-12 schools and post-secondary institutions leads to a more skilled workforce, a narrower “digital divide”, a more diversified economy, and wider participation of all citizens in the knowledge-based economy, the government set a plan in motion. For the long term, to have an entire workforce educated and trained with information and communication technology; and within the next five years, to make computer access a part of everyday life for a growing generation of Brazilian children.



To make these goals feasible, the Brazilian Ministry of Education needed to deploy the most cost-effective desktops possible in their computer labs. Userful's in-country partner in Brazil, ThinNetworks, and through their extensive reseller network, Positivo, Itaotec, and Daruma proposed a low-cost, high performance Linux desktop solution that allows five students to work at the same time on a single Linux desktop computer -- with the PC-sharing hardware and software costing 60% less than a traditional PC-per-seat solution. Each student has their own monitor, keyboard and mouse with a full desktop experience and access to all the necessary educational applications.

The Challenges

The Brazilian Ministry of Education used strict performance and testing criteria, including a regimen of pilot testing in various rural areas and urban centers, which clearly outlined specialized requirements that would have to be met for success.

Quick Facts

Case Study at a glance

Userful MultiSeat not only saves money, it also helps the environment by reducing electricity use and e-waste. As compared to a traditional PC-per-seat solution, the Brazilian Ministry of Education are annually saving:

ECO SAVINGS

Average based on this case study per year

Electricity Saved: 147,000,000 KWh
= Enough to power 81,000 homes for a year

CO/2 Saved: 250,000 tons of CO₂
= Taking 41,000 cars off the road for a year, or planting 60,000 acres of trees

TOTAL COST OF OWNERSHIP

Userful MultiSeat's ability to turn 1 computer into 10 saves money by greatly reducing hardware, electricity and support costs.

ABOUT USERFUL MULTISEAT™

Userful MultiSeat™ is software that turns 1 Linux computer into 10 high performance independent computer stations, supporting up to 10 independent users at the same time -- each with their own monitor, mouse, and keyboard.

To learn more about Userful™ please visit:

www.userful.com

or call

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The Ministry of Education faced many daunting challenges. They needed to:

- Deploy and manage desktops in multiple educational sectors spread across a wide geographic area
- Maximize their IT budget for computers, software, maintenance and support
- Reduce software licensing costs
- Reduce the expense and downtime of battling computer threats such as: viruses, malware and hackers
- Minimize the amount of electricity used
- Reduce e-waste and pollution

In addition to these challenges -- which are faced by all school districts around the world -- the Brazilians faced unique infrastructure challenges. The deployments included remote schools in indigenous villages where infrastructure is minimal, electricity is unreliable, there is little physical space, and roads are impassable by car.

The Solution

Userful, ThinNetworks, and the large system builders Positivo, Itaotec, and Daruma came together to provide a low-cost, high-performance computing solution: one computer powering five independent workstations. Positivo, Itaotec, and Daruma provided the PC's, and ThinNetworks provided the video cards, audio hubs and the heart of the project -- Userful MultiSeatTM software.

The Brazilian Ministry of Education chose the free Linux operating system as the platform, calculating the projected long term benefits this choice will bring to the Brazilian economy. With access to thousands of high quality software programs specifically suited to the management and education of K-12, teachers are easily tailoring curricula to individual students from a young age. Students are developing digital skills that will help them with their school work and prepare them for jobs in the future. Because there are no licensing fees or restrictions on open source software, students are also continuing to learn, explore and utilize software programs at home. This has allowed families to be more involved in their children's education.



On average, schools using Windows in Latin America have reported spending 40% of the value of their computer purchases on software licensing fees. Embracing Linux and Open Source software frees up this spending so that schools and ministries can provide more students with computer access for the same budget. Virtually every Windows application has a free equivalent for Linux and because of the stable and secure design of Linux, less intervention by IT support staff is required to resolve virus issues and keep the computers running properly. Selecting MultiSeat Linux not only ensures lower deployment costs, but also sows the seeds for a future local ICT economy that isn't locked-in and dependent on a foreign monopoly.

The Results

Success! 35 million students in over 50,000 schools throughout Brazil are now enjoying 523,400 new computer stations, in what has become the largest digital inclusion project in the world. Compared to a traditional PC-per-seat solution, the Brazilian Ministry of Education is saving 60% in up-front costs, 80% in annual power savings, additional savings in ongoing administration and support costs, and five years down the road only 1/5th the number of computers will need to be upgraded. In many of these schools the substantially reduced infrastructure requirements of Userful MultiSeat (e.g., just one power plug and network connection required) made it possible to deploy these labs without upgrading wiring in the school, achieving even further savings over traditional approaches.

Greatly reducing technical costs has allowed for significant expansion of this project. Hundreds of thousands more Userful MultiSeat Linux desktops are being deployed in Brazilian schools. The success of this project has shown how even populous and geographically large countries like Brazil can create great and long-lasting positive results from well orchestrated digital inclusion initiatives. Other countries are following Brazil's lead and are taking advantage of Userful's ability to turn one computer into ten.

"Thanks to this project we will be able to provide information technology access to almost every single Brazilian student. But the scope of the project goes beyond that: it's only the beginning of a cycle for children, teenagers and adults that will be socially integrated from now on"

- Luiz Cláudio Ferreira, President
ThinNetworks

**To learn more about Userful MultiSeatTM
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