

CASE STUDY

# Nebras Technology saves 12 months of development time with Telerik RadControls for WinForms while building groundbreaking radiology remote diagnostic application.



Clinical imaging specialist Nebras Technology realized that technology could save lives by bringing remote diagnostics to regions where skilled radiologists were thin on the ground. Using Telerik RadControls for WinForms, Nebras created a groundbreaking application – while saving 12 months of development time.

**OVERVIEW**

**SECTOR**

Healthcare

**REGION**

EMEA

**CUSTOMER PROFILE**

Egypt-based Nebras Technology develops information systems for healthcare providers. Specializations include radiology, endoscopy, dentistry and electrocardiography.

**CHALLENGE**

Creating a rich, attractive user interface was a critical factor in the development of a groundbreaking remote-diagnostic tool for radiologists.

**SOLUTION**

Nebras Technologies chose Telerik RadControls for WinForms.

**BENEFITS**

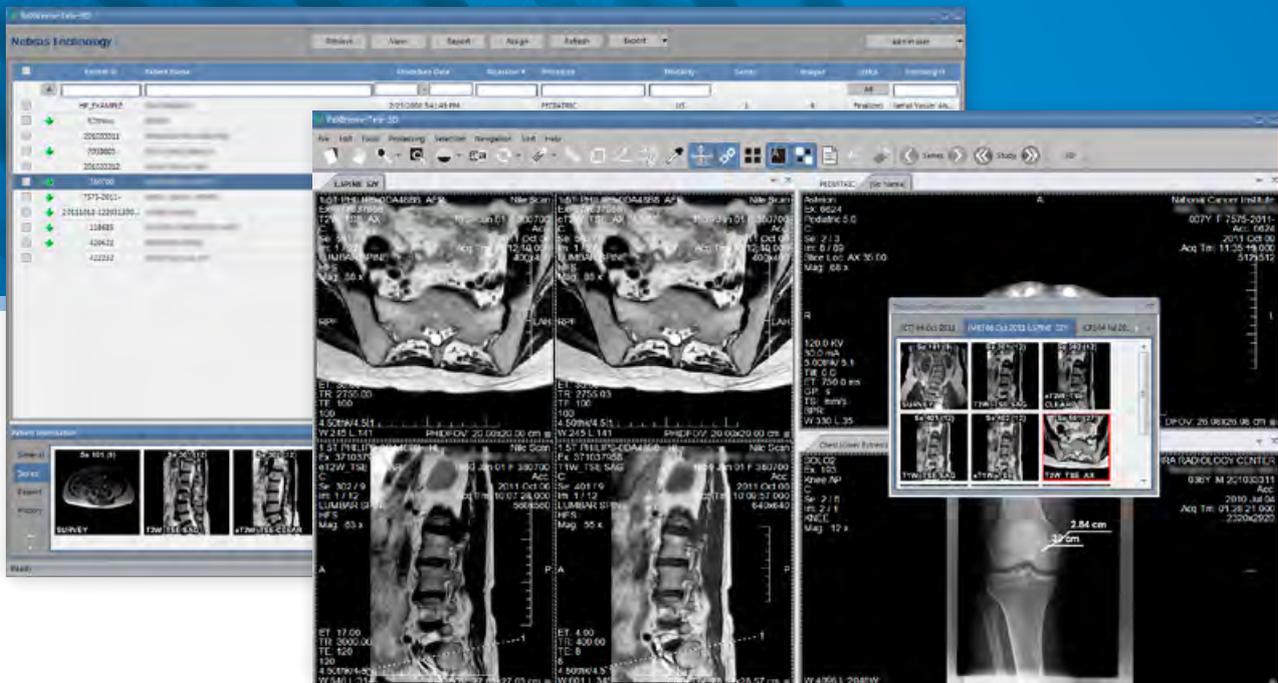
- Successful delivery of rich, high-performance application
- Saving 12 months of development time



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“By using the Telerik WinForms library, we were able to deliver new requirements fast, position our product in a different category and be able to incorporate our most innovative ideas.”

Hesham Desouky,  
Development Manager, Nebras Technology



## TELERIK RADCONTROLS FOR WINFORMS – PRODUCTIVITY AND PERFORMANCE

The Telerik RadControls for WinForms component suite is designed for the creation of superfast, reliable and feature-rich desktop and touch applications. Leveraging years of expertise in interface development, RadControls for WinForms frees developers to focus on core logic by delivering a comprehensive set of high performance components and tools.

Inspired by WPF, RadControls for WinForms support incredible visual effects like transparency, rotation, animation, and transition. The controls enable developers to transform data into interactive, richly animated and modern layouts, empowering end-users to analyze complex data.

Despite the rich visual effects, RadControls for WinForms has been crafted for high performance by minimizing the amount of repainting and layout rearrangements needed. All data controls, such as GridView, TreeView and ListView feature a powerful data engine, which guarantees blazing fast data loading and updates.

The RadControls Visual Studio integration package boosts developer productivity. The Extensions automatically create, upgrade and configure RadControls projects in seconds, eliminating the need to manually set any assembly references. The WinForms Project configuration wizards automatically handle the dependencies between the assemblies, avoiding version conflicts and ensuring that the latest version of RadControls is always available.

## BACKGROUND

Nebras Technology creates information systems for clinical imaging. Covering radiology, endoscopy, dental and electrocardiography, Nebras solutions help medical staff manage diagnostic data more efficiently, speeding treatment and reducing cost.

Thanks to the falling cost of technology and government healthcare initiatives, modern imaging equipment is now more accessible than ever before, even in remote locations. Patients who previously had to make long journeys to central hospitals can now be scanned at local clinics.

But while testing equipment is now more available in remote areas, skilled radiologists are not. Nebras Technology realized this bottleneck could be eliminated by using modern technologies to send images to specialists for diagnosis. Specialists then report back to local physicians with recommendations for treatment.

## THE CHALLENGE

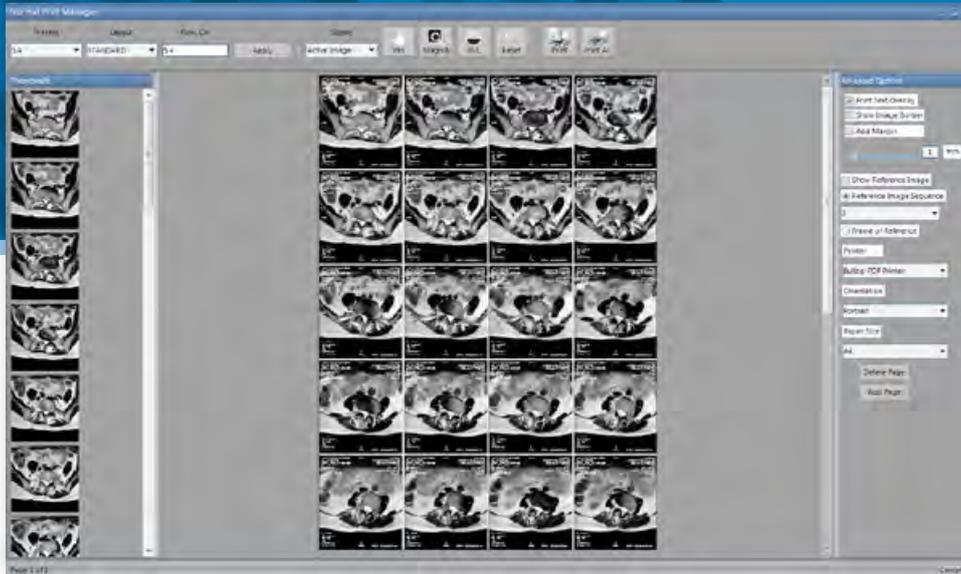
To meet this need, Nebras Technology set about creating PaXtreme-Tele, a smart client application for the company's flagship PaXtreme PACS Server radiology management system.

The objective was to create an application which would enable specialists to review patient images using normal internet connections, and without the inconvenience of VPN barriers.

From the outset, the user interface was a key element of the application design. With doctors expected to use the application for many hours each day, it was a high priority to deliver an efficient and pleasant user experience. However, the Nebras team found it hard to achieve the desired user experience.

"Due to the lack of suitable user interface controls in open source or standard controls from Microsoft, we had difficulty implementing various features," says Hesham Desouky, Development Manager and Cofounder of Nebras Technology. "Developing these controls from scratch would have been time consuming and would have increased our product time to market."

The Nebras team decided to look for third-party controls. "Our key requirements for a controls library were a complete control set, theme support, good performance in real world scenarios and strong support with large community forums."



## THE SOLUTION

The Nebras team evaluated a number of third party toolsets before deciding to use Telerik RadControls for WinForms.

“We initially found the Telerik controls through Google,” says Hesham. “When we dug deeper, we were favorably influenced by the discussions on stackoverflow.com and the positive feedback on various forums such as asp.net.”

Drawing on the extensive documentation and community resources for RadControls, the Nebras team was able to get started immediately.

“Telerik provides good documentation, and the large community forums and knowledge base library with videos and blogs enabled us to start using the controls in our existing application easily.”

### EXTENSIVE USE OF RADCONTROLS FOR WINFORMS

RadControls for WinForms were used throughout the PaXtreme-Tele application:

- **RadGridView:** Using RadGridView control to display large data-sets was important for the Nebras team. “We needed to be able to download data in virtual mode and display it in the grid on-demand, according to the required records.

The grid provided us with a very flexible APIs to implement this scenario very easily.”

- **TelerikDock:** This is the core of the PaXtreme-Tele Image Manager where the collection of scans for each patient can be opened in its own dock document. These can be arranged by the user in tabs or docks. The docking UI is also crucial for the application’s Print Manager, which enables radiology technicians to perform film printing tasks quickly and efficiently.
- **RadCommandBar:** Provides toolbar functionality for the Image Manager. The capability to save user preferences for the order/visibility of buttons made it possible to provide user interface profiles for each user.
- **RadPageView:** Display the patient information card, especially using the left aligned tabs.
- **RadSplitContainer:** Drives the Printing Page layout where technicians are able to specify various printing layouts for images with the ability to resize the image boxes as desired before printing.
- **Other controls used throughout the application:** RadMenu, RadForm, RadDropDownList, RadDateTimePicker, RadTextBox, RadLabel

### TELERIK RADCONTROLS FOR WINFORMS – CUSTOMIZABLE AND ADAPTABLE

By following WPF best practices, the Telerik Presentation Framework provides a completely customizable architecture for all RadControls. The uniform nature of the RadControls architecture makes it possible to nest controls within one another for more flexible and modern-looking user interfaces.

The Telerik Presentation Framework supplies attractive defaults for the controls, while allowing developers to exercise fine-grained, CSS-like control over every aspect of their appearance and behavior. This unique feature of Telerik Controls for Windows Forms makes it possible to achieve previously impossible visual effects without having to write any code or learn a new technology.

All Telerik Windows Forms controls come with full theme support – use any of the included themes, or build new ones with the intuitive and unique Visual Style Builder tool.

With the globalization of business, the need for multi-lingual applications is a must. That’s why Telerik Windows Forms Dock supports all RTL languages, such as Arabic. RadDock’s window captions, drop-down menus and action buttons (close, pin/unpin, etc) are fully localizable through a simple and intuitive localization provider, or through resources.

## THEMING

Look and feel was a key factor in delivering a successful application, as users would be required to use it for hours each day.

"It was very important to us to be able to provide a nice experience to users. The Telerik Theme Builder provided us with the tools to implement our theme set in a very short time."

## SCSF SUPPORT

The Nebras team used the SCSF Library in the creation of the application. "Telerik SCSF support saved us a lot of time – we were able to use controls such as Telerik Dock, RadPageView and RadForm out of the box."

## THE RESULT

The PaXtreme-Tele application was completed on time and on budget, and has already been implemented for several customers across the Middle East. Take-up has been strong in Egypt and the Gulf, starting with the Kingdom of Saudi Arabia.

"The application's ease of use – thanks to Telerik – has been a key factor in attracting the attention of radiology departments," says Hesham.

"We are now replacing old existing software from other vendors in various radiology centers. We are attracting the interest of new radiology centers, who want to use our product to empower their imaging workflow and tele-radiology capabilities."

## THE VERDICT

Using Telerik's RadControls for WinForms was critical to the success of the PaXtreme-Tele application.

"By using the Telerik WinForms library, we were able to deliver new requirements fast, position our product in a different category and be able to incorporate our most innovative ideas." says Hesham. "Telerik WinForms controls saved us time to implement various UI controls which would have required more than 6-12 months for our development team to implement."

## ABOUT NEBRAS TECHNOLOGY

Egypt-based Nebras Technology develops information systems for healthcare providers. Nebras solutions are reliable, easy to learn and use, very well supported and realistically priced. Specializations include radiology, endoscopy, dentistry and ECG. "Since growth is a natural consequence of success, we build scalable products that can continue to meet your needs as your business grows."

## ABOUT TELERIK RADCONTROLS FOR WINFORMS

RadControls for WinForms includes over 60 UI controls designed to make it easy to build visually appealing, high performance Line of Business and Metro applications.

Boasting a well-designed architecture, touch capabilities, support for Visual Studio 2012 and CAB, Telerik Windows Forms Controls are perfectly suited for the most demanding Enterprise desktop development.

## ABOUT TELERIK

Telerik is the market-leading provider of end-to-end solutions for application development, automated software testing, agile project management, reporting, and content management across all major Microsoft development platforms. Telerik is trusted by more than 100,000 customers worldwide for its innovation and industry-best technical support.

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Call us +1-888-365-2779

Email [sales@telerik.com](mailto:sales@telerik.com)

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