Infoland integrates RealObjects edit-on® NG in its document management system "iDocument"

Infoland - a Dutch independent software vendor - has developed a document management solution called iDocument, which is highly successful in the Dutch and Belgium healthcare sector. iDocument offers WYSIWYG editing of HTML documents, powered by edit-on® NG. Infoland has realised seamless integration of RealObject's editor into its own solution, using the available API's and customization options of edit-on® NG. This has been the result of close cooperation between RealObjects and its OEM-partner Infoland.

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About Infoland

Infoland is an independent software vendor, focusing on developing software which helps organisations to improve the overall quality of their products and services and to make organisations more transparent and more profitable.

Founded in 1998, Infoland now employs over 75 professionals, mainly active in software development, customer support, consultancy and training.

Covering the Dutch and Belgium market, Infoland's headquarters are located in Veldhoven, The Netherlands. Additional sales offices are located in Geel, Belgium and Houten, The Netherlands.

The foundation of Infoland's offering is an integrated suite of software products which is called iProva. Core features of iProva are document management (iDocument), incident reporting and analysis, audit- and compliance management, tracking and tracing of improvement measures, process -and risk management. All iProva modules are extremely flexible, which allows them to be fit perfectly in organisations ranging from <50 employees to academic hospitals with over 10.000 employees. Outstanding usability and a feature set focused on the daily practice of our customers also distinguish iProva from other solutions.

Infoland focuses on organisations in the healthcare and welfare sector and has established a strong position in these markets. Over 350 organisations in the Netherlands and Belgium make use of one or more products of Infoland. Among them are over 80% of all Dutch hospitals.
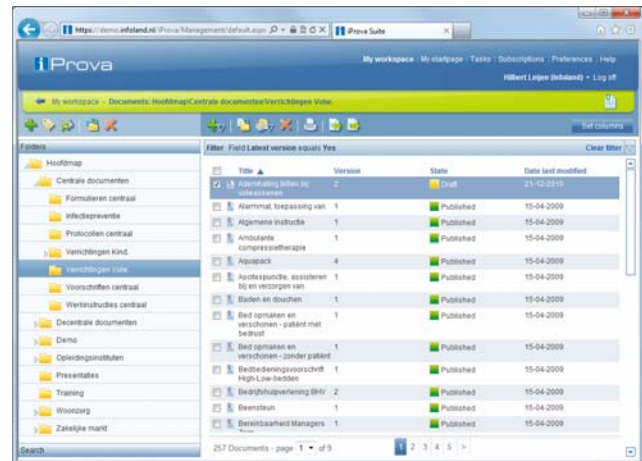

Starting situation

In 2008, Infoland started the development of its next generation document management product, called **iDocument**. iDocument would be fully web-based, including the environment for editing documents (as opposed to the predecessor of iDocument, which was only partially web-based, and used Microsoft Word™ as its editing environment). The selection of a proper WYSIWYG editing component which could be integrated in a web-based environment was therefore started.

At the time, Infoland had experience with the MSHTML editing component. It was quickly decided that a better solution had to be found because essential features like in-line spell checking and proper support for editing tables could not be offered by MSHTML.

Infoland also decided that developing an own editor from scratch was not an option; it would rather focus its own development capacity on building the product itself, and rely on 3rd party vendors for the more or less generic building blocks like an editing component.

At the time, most available editors were JavaScript-based, but our first selection also included an ActiveX based editor and the Java-based edit-on® Pro editing component from RealObjects.
While some JavaScript editors made a better impression than the MSHTML solution, they still lacked essential features. The ActiveX editor did better, but did not meet Infoland's high usability standards and lacked support for customization.
It was concluded that only the edit-on® product combined a rich feature set with a decent user interface and sufficient options for customization, and it was therefore selected.
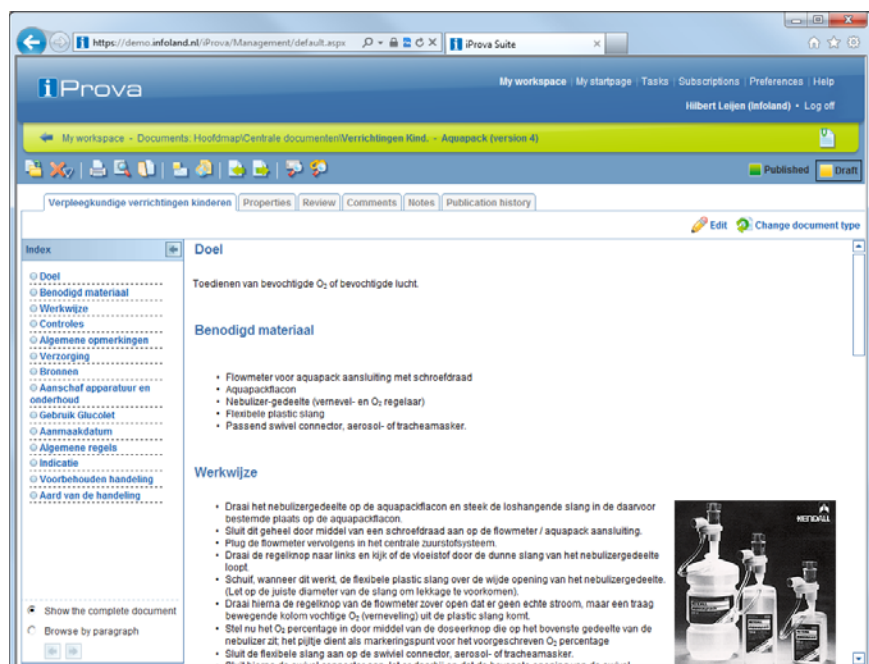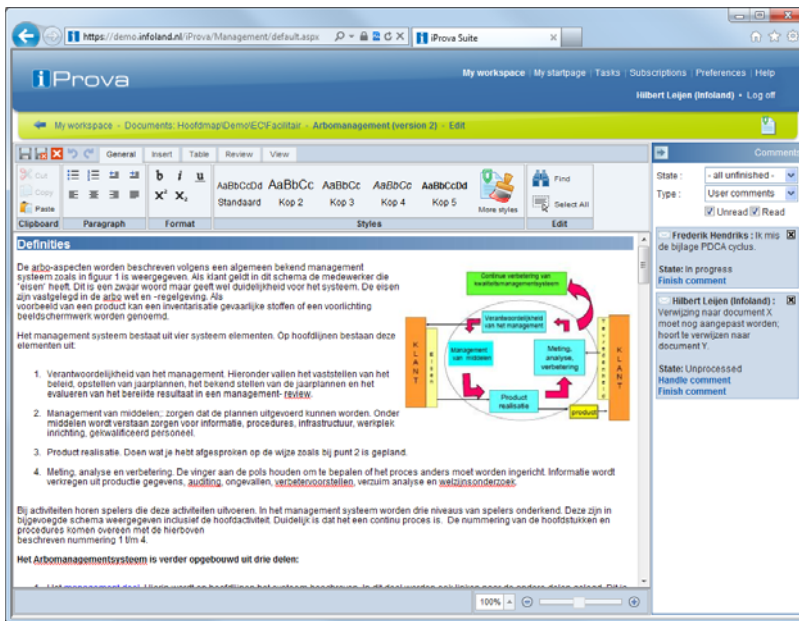
Solution

The document management system **iDocument** is based on Microsoft® ASP.NET technology, with a Microsoft® SQL Server back-end. Although all kinds of documents can be stored in iDocument, most customers primarily use documents in HTML format. The document content is stored in the SQL Server database, which also contains version history, metadata, managed hyperlinks, permissions and audit trails.

iDocument user interface
The web-based user interface of iDocument offers a range of document management features.

The edit-on® NG editor can be launched by clicking the "Edit" link. The editor is seamlessly integrated in the iDocument user interface.
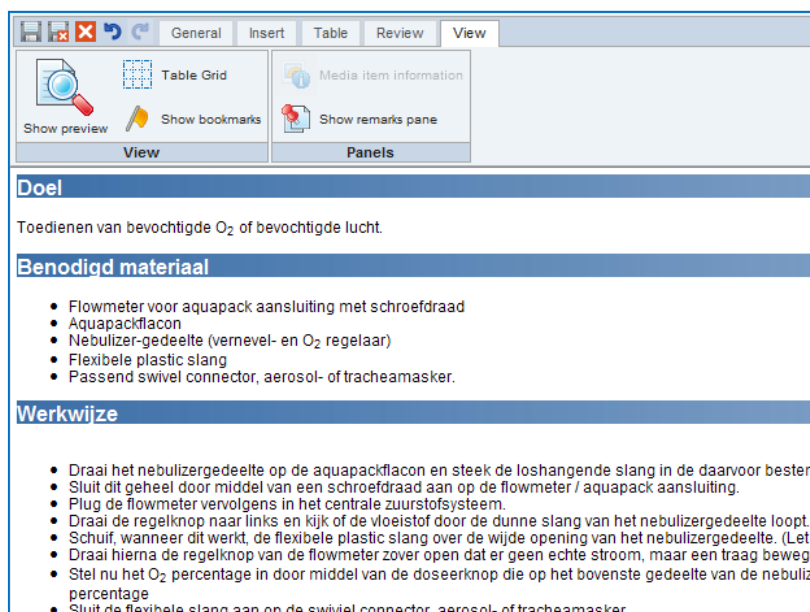
Editing environment of iDocument, featuring edit-on® NG.
The user interface is customized with modified ribbon layout and icons matching the visual style of iDocument. A side pane has been added to allow editors to handle comments which have been added to the document without having to leave the editor.
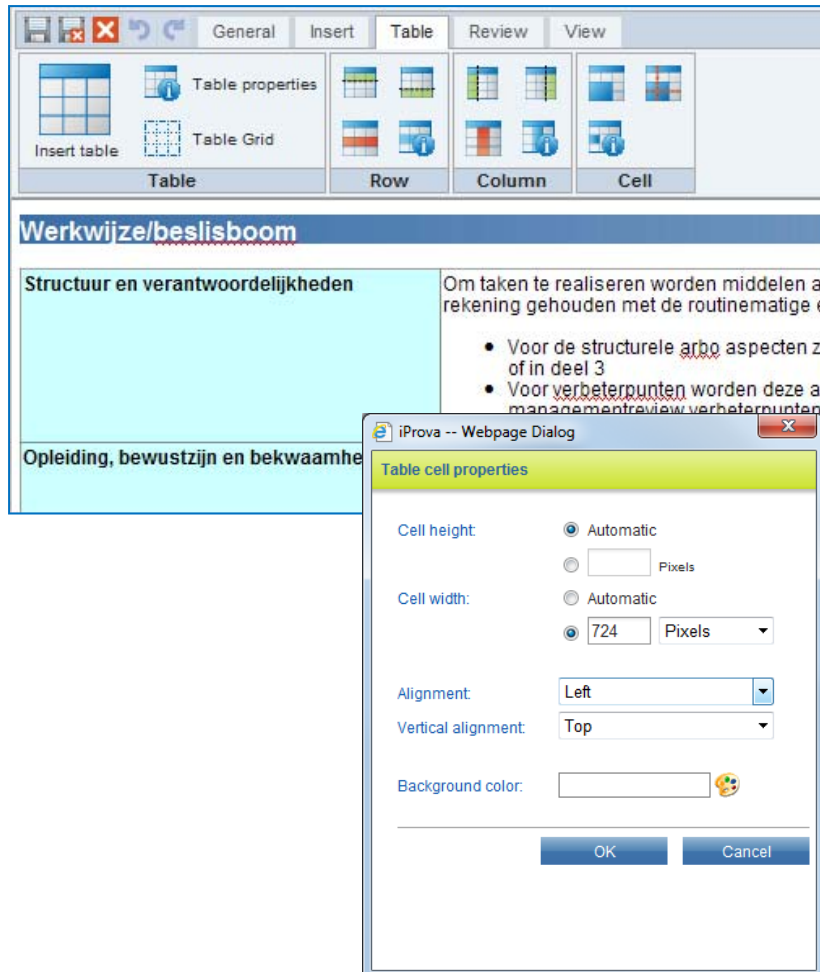
Infoland integrated the edit-on® editing component in its ASP.NET web application.
When an HTML document is edited, its content is retrieved from the database and loaded into the editor. When the document is saved, the modified content is retrieved back from the editor, parsed for newly added hyperlinks and then stored in the database again.

The user interface of the editor was customized; the standard icons were replaced by icons matching the look & feel of iDocument and toolbars and menus were modified to fit Infoland's needs. In order to keep the layout of documents uniform, various layout features were made unavailable for end users; instead the usage of layout profiles (like "Heading 1", "standard text", "important text") was offered, including an administrative feature for editing and creating layout profiles.

In order to get a uniform user interface, Infoland decided to replace various built-in edit-on® dialogs by its own dialogs. The use of custom dialogs also made it possible to offer iDocument specific features, like inserting images from the iDocument media library, in the editor.

Table support
A wide range of table editing options is offered through the ribbon and via context menu's. Resizing tables is also possible using drag&drop.

Custom dialogs have been implemented (as ASP.NET web pages), following the iProva look & feel.
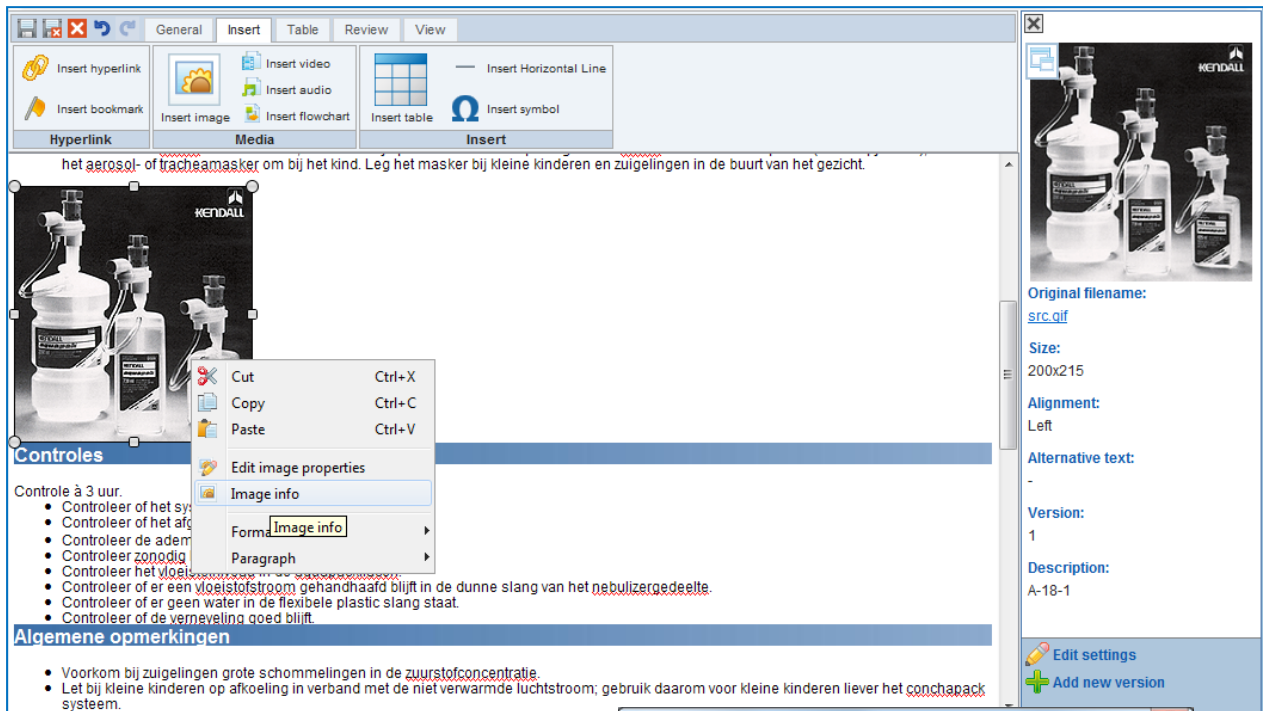
The edit-on® NG Javascript API was used to connect the custom dialogs to the editing component.

In 2010, RealObjects launched edit-on® NG as the successor for edit-on® Pro.
edit-on NG introduced a more powerful and flexible rendering engine, as well full Unicode support and an improved user interface featuring Microsoft Office™ like "ribbons".

Inspired by the new capabilities of edit-on® NG, Infoland decided to make a full redesign of its editing environment which featured a brand new user interface, better performance and various new features. The new editor for **iDocument** launched in June 2011 and received a warm welcome amongst Infoland's customers.

"The wide range of possibilities for customisation and the easy to use XPath selectors really helped us integrating edit-on® NG exactly the way we wanted to."
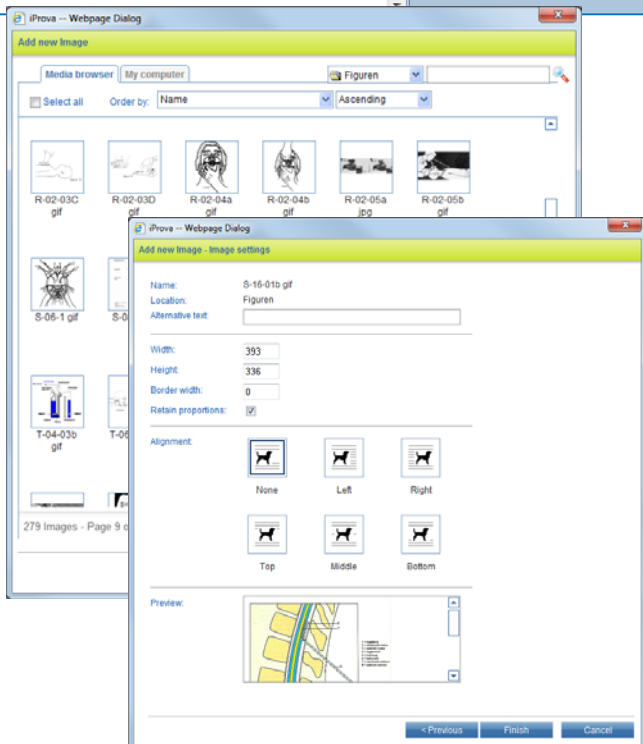**Paul Vrugt – Sr. software engineer - Infoland**

Media support
Custom dialogs have been implemented for inserting images, flowcharts and audio/video fragments.

Items can be inserted by selecting them from the iDocument media library, or by uploading them from the user's computer.

Pictures which are copied into the editor from Microsoft Word or a picture editor are automatically recognized and added to the iDocument media library.

A custom side pane has been implemented to display additional information about multimedia items in the document. This feature heavily depends on the Javascript API of edit-on® NG.
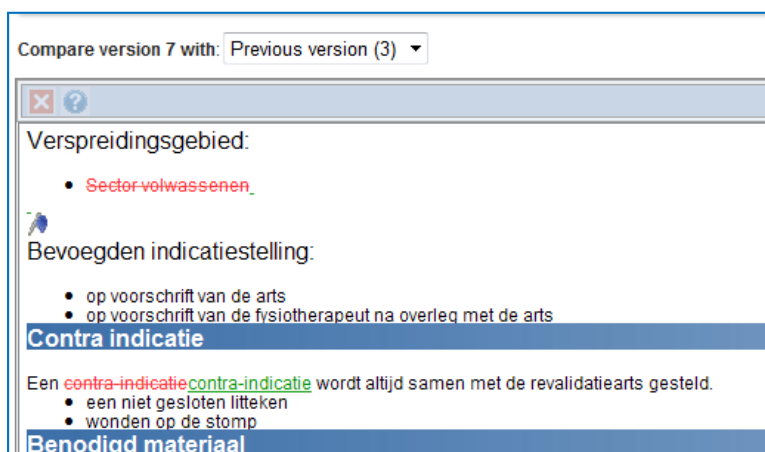
Challenges

One of the challenges Infoland faced when developing iDocument was the requirement to support HTML documents which were created in the predecessor of iDocument, which still used Microsoft Word as its HTML editor. edit-on® NG expects well-formed XHTML documents, but the HTML code produced by the various versions of Microsoft Word doesn't even come close to that.
This problem was tackled by adding improved clean-up algorithms, partially in edit-on NG and partially in iDocument.

Another issue which was encountered was the use of special characters which were inserted in legacy documents by using the "Symbol" and "Wingdings" font families. When documents containing this kind of symbols were edited in edit-on® NG, they could not always be displayed properly. Infoland and RealObjects worked together and managed to find a solution for this issue.

In order for Infoland to accomplish the seamless integration of edit-on® NG in iDocument, RealObjects also extended the JavaScript API of edit-on® NG. This allowed Infoland to implement a range of custom dialogs and custom side panes.

Comparing document versions
The VersioTrack add-on for edit-on® is also implemented in iDocument. It allows editors and reviewers to compare the current revision of the document to earlier versions in an easy manner.

A solid partner in development

iDocument is one of Infoland's core products, and its HTML editor is one of its most critical features. When selecting a vendor, Infoland therefore did not just evaluate the capabilities of the editor product, but also investigated the level of support and the product roadmap.

The support provided by RealObjects has always been outstanding; fast response, and always willing to cooperate in finding solutions for the challenges which Infoland encountered during the development of iDocument. The developer-to-developer workshop RealObjects organised is a good example of the commitment RealObjects shows to its OEM partners.

RealObjects has also proved that it has a solid product development roadmap, which guarantuees that its edit-on® product will remain to be best-of-breed for the years to come.

Conclusion

Infoland successfully embedded edit-on® NG into its document management system iDocument, resulting in an powerful and very user friendly editing environment. Seamless integration of the editor in iDocument was made possible by the extensive customisation options of edit-on NG and outstanding support provided by RealObjects.

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