

# Usability through graphic possibilities

## Ergonomics for the user [2/4]



zenon provides unique graphic possibilities for automation projects.

You can thus raise the usability of the completed application to a level that was previously unheard of.

The results for the user are short training times thanks to intuitive operation, optimum reaction times and the highest possible level of security when in operation. This is how users unlock their potential and then that of the machines and equipment.

### TOUCH AND KEYPAD OPERATION

zenon offers numerous functions that make operation of projects easier using touch screens and membrane keyboards. Hotkeys, tab keys, cursor keys, several freely-definable keyboard screens or a soft keyboard are used for navigation. The right mouse button can be simulated for touch operation. Context menus can thereby be used for touch screen operations. Functions such as the lasso function and drag & drop are optimized and also increase the usability of zenon projects.

### MULTI-TOUCH

zenon offers full support for Multi-Touch gestures. New, innovative methods of operation can therefore be implemented. Users benefit from perfect usability and operational security. You can find more information on the Multi-Touch fact sheet #25.

### WORLDVIEW

With zenon Worldview, process screens are displayed that cannot be displayed as a full screen on the monitor. Zooming, jump objects and different sections can be used to navigate through this Worldview. zenon Worldview supports different degrees of detail in different zoom levels with decluttering. Touch, Multi-Touch or the mouse can be used to navigate in the zenon Worldview.

### MENUS AND KEYBOARDS

Windows-compliant menus guarantee intuitive operation and allow you to design particularly user-friendly projects. zenon supports main menus and context menus. zenon menus also work with touch and Multi-Touch operation.

### FAST FACTS

- ▶ Operation with keyboard, touch and Multi-Touch
- ▶ Full DirectX 11.1 Support
- ▶ Animated process screens
- ▶ Integration of external WPF elements via XAML format

### DIRECTX 11.1 SUPPORT

zenon is the first HMI/SCADA system in the world to offer full support for DirectX 11.1. zenon therefore offers maximum performance and additional possibilities for using graphics. For example, the accentuation of screen elements using glow effects and softening the background when actions are carried out. In addition, the support of DirectX 11.1 reduces the load on the CPU, because graphics calculations are outsourced to the GPU. The performance of the whole application increases.

### DISPLAY ELEMENTS

There are many pre-designed graphical display elements available in zenon. This allows you to implement various display and representation forms with only a few mouse clicks.

### ANIMATED PROCESS SCREENS

Dynamic effects in zenon screens can be implemented using several methods:

- ▶ Dynamic elements: These show variable values as display elements (numerical value, pointer instrument, etc.) or as dynamic effects (such as color changes of freely defined elements).
- ▶ Dynamization using the properties of the elements: Dynamizations dependent on variable values can be set at the elements directly (position, size, color change).
- ▶ Automatic Line Coloring (ALC) for the process engineering. exemplary display of lines or pipes and their status.

### WPF

WPF elements allow separation into graphical design and functional configuration. The engineer can simply use elements created by graphic artists in external programs using XAML in the zenon Engineering Studio. They only need to be linked to the desired function and are ready for use. This way, usability and design can be improved optimally with no additional programming work in the zenon Engineering Studio.

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<b>Menus</b>	<ul style="list-style-type: none"> <li>▶ Main and context menus</li> <li>▶ Work with mouse, touch and Multi-Touch operation</li> </ul>
<b>zenon World View</b>	<ul style="list-style-type: none"> <li>▶ Complete facilities are presented</li> <li>▶ Displayed in sections</li> <li>▶ Zooming</li> <li>▶ Decluttering</li> <li>▶ High level of detail</li> <li>▶ Direct control using object names</li> <li>▶ Navigation with mouse, touch and Multi-Touch</li> </ul>
<b>Graphic properties</b>	Color gradients, transparency, shading, asymmetry, vector elements, pointer instruments, color changes, 3D functions, glow and blur effects and much more.
<b>WPF</b>	<ul style="list-style-type: none"> <li>▶ Library of WPF elements that can be integrated immediately</li> <li>▶ Simple use of externally-created WPF elements</li> </ul>
<b>Chameleon Technology</b>	<ul style="list-style-type: none"> <li>▶ Central color palette administration</li> <li>▶ Can be switched in Service Engine</li> <li>▶ Pre-defined and adaptable skins are included with zenon</li> </ul>
<b>Graphic operation</b>	<ul style="list-style-type: none"> <li>▶ Support for drag &amp; drop and copy &amp; paste in the Engineering Studio</li> <li>▶ Copy formats in the Engineering Studio</li> <li>▶ Drag &amp; drop support in Service Engine</li> <li>▶ Lasso function in Service Engine</li> </ul>
<b>Default process screens</b>	<p>Pre-defined process screen types for:</p> <ul style="list-style-type: none"> <li>▶ Alarm Message Lists</li> <li>▶ Chronological Event Lists</li> <li>▶ HTML browser</li> <li>▶ Time filter</li> <li>▶ Extended Trend</li> <li>▶ Reports</li> <li>▶ and much more</li> </ul>
<b>Visibility</b>	<ul style="list-style-type: none"> <li>▶ Freely-definable visibility of elements; coupling to user rights system possible</li> <li>▶ Interlocking conditions for elements can be easily entered using a formula</li> <li>▶ Decluttering: Visibility settings coupled to zoom levels</li> </ul>
<b>User-related settings</b>	<p>In zenon Service Engine, user-related profiles can be used in order to enable individually-adapted workspaces:</p> <ul style="list-style-type: none"> <li>▶ Graphical profiles such as positioning of frame windows;</li> <li>▶ Content-based profiles such as filtering in lists.</li> </ul> <p>The profiles can be defined by the users themselves and are available once logged in.</p>
<b>External graphics formats</b>	JPG, bitmaps, vector graphics, animated GIFs (starting and stopping possible using variables).
<b>External dynamic elements</b>	.NET and ActiveX Controls, WPFs.