SpiderControl™

Browser solution

AutomationBrowser

The new AutomationBrowser by SpiderControl™ has been filed for patent application!

If you want to use an industrial panel with an HTML5 web browser, the AutomationBrowser will offer you numerous and helpful functions, which can not be missed in a PLC environment today.

The AutomationBrowser can be used universally and offers enormous advantages:

- Compatibilty with legacy Java Applets (e.g. CODESYS 2.3 Webvisu)
- PLC station list to navigate to different Web-servers and back
- Single Sign On (SSO)
- Collective alarm
- Cloud connectivity
- Simple PLC logic in the browser etc.

PLAIN AND SIMPLE

CODE WITH YOUR APP OR BROWSER

Why the AutomationBrowser?

Web-based HMIs are today standard in automation for operation and monitoring. Through the available browsers – on a wide variety of devices – Web technologies offer a high degree of simplification and modularity in the development of graphical user interfaces. The same technology also allows operation in the operator panel, on the PC, smartphone or tablet. But: so far, so good – where are still unresolved problems today?

Web-based HMIs can be easily stored directly on controllers, because integrated embedded Web servers are available almost everywhere today. A currently major obstacle are older Web HMIs, which are used on many installed controllers that are based on Java Applets and are no longer supported by popular browsers. These include, for example CODESYS Webvisu V2.x or even older SpiderControl™ OEM versions on PLC by Phoenix Contact, SAIA-Burgess, Panasonic and many more.

Another problem will arise when you have several automation systems in one system and the operator station has to jump back and forth between the various Web servers, so that the operator can even see all relevant information there. From technical point of view, this is not a problem. To switch from one server to another, the stored URL link will do. In practice, however, this can be complex and often problematic. That means you have to deposit the possible URL jumps in the HMIs and on all Web servers in advance. It is also a considerable effort and in some cases it´s not possible at all, if the Web HMI was developed by a third company. Another problem will be the log-ins. Usually there are several user levels in an operation for which one has to identify first. But if you jump from one Web server to another, this information is lost and the login proce-dure will start again. Another important issue is pop-up messages that should be displayed to the user immediately if there is a problem with the system. However, if this happens while the panel displays HMI fron another Web server, the user does not get this error. The SpiderControl™ AutomationBrowser by iniNet Solutions is developed to solve this problems and contains also other useful functionalities for automation. For ex-ample a so-called station list can be created directly in the AutomationBrowser, in which all connected controllers are stored with their URL. This list can be displayed at any time, even if the browser is currently located on an HTML page of a controller. It is not necessary to make any changes to existing Web HMIs of controllers. The difference to a „favorites" list – as well known from a conventional browser: as the browser on the panel is expected to operate in „kiosk mode" (full screen), it cannot access all normal functions of the browser menu. Only the station selection and, if necessary, a "back" button will be displayed. Also, the station list can be displayed in a touch-screen-friendly, large format in order to increase the user-usability. This start page can even be customized by a programmer. To solve the problem of compatibility with older web HMIs, several browsers have been integrated into AutomationBrowser. Invisible to the user, the AutomationBrowser simply selects the right viewer by itself, which makes it easy to integrate older Web visualizations like CODESYS V2. The answer to the annoying log-in problem is called "single sign-on". The AutomationBrowser is able to save the log-in status on a PLC or the associated passwords. In contrast to a normal browser, which saves the passwords of websites and automatically completes them at the next log-in, the AutomationBrowser uses the password of the current user when switching to another controller. If it logs out, the password is also deleted for safety reasons. If a new user comes and goes to another controller, the password of the predecessor should under no circumstances be used. Here, the password of the new user is queried once, stored and automa-tically used for log-out of the operator on all controllers for log-in.

The topic "collective alarm" also plays an important role. The AutomationBrowser can be configured to cyclically monitor specific variables from each controller and automatically jump to an alarm summary in the event of an alarm, allowing each user to respond promptly. This runs in the background, invisible for the operator. It does not affect the HMI performance in any way, as this monitoring takes place in a separate task. If desired, this task can fulfill further logging functions or store historical data. Most of the AutomationBrowser functionality can be easily used with existing Web HMIs without having to change these HMIs. As a result, the AutomationBrowser increases the practical suitability of existing Web-HMI's, increases the customer's benefit and the maintainability of the applications.

The new AutomationBrowser is now available for the operating systems Android and soon for Windows 10, other platforms are in development.

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