A new generation of SCADA/HMI software
Progea presents a new era in industrial supervision with Movicon.NExT™

Movicon.NExT™ is a new generation of software products that revolutionizes SCADA and HMI system technology in a way never imagined before. Movicon.NExT™ is based on the Automation Platform.NExT™ technology, a software architecture designed for building the foundations of modern automation software. It is an open and scalable platform based on .NET and the latest connectivity software and the new generation of WPF/XAML vector graphics rendering software. It is structured on the modular concepts with plug-in technology to make industrial software architecture more open and scalable by integrating function modules that are capable of managing all business enterprise needs efficiently. This modular and open platform will empower automation professionals as the perfect solution for Supervision, HMI, Control, Historian, MES and industrial Analysis.
 Movicon.NExT™ is the best SCADA/HMI software solution for all industries

Technology evolution is essential in the competitive automation world. Technology evolution is not just a question of introducing new features or improvements here and there. It involves finding the courage to confront new challenges directly, rethinking approaches and brainstorming to find better ways to venture into new technology frontiers. This is the only way to make the imaginable a reality. Movicon.NExT™ is the new frontier of SCADA/HMI technology. We are not just dealing with an enhanced Movicon platform but a completely new platform designed on the technology of the future. This is the fruit of Progea’s 25 years of experience in the automation sector and represents a new reference point for SCADA/HMI software. The Platform.NExT™ project has been engineered to override the restricted use of conventional SCADA/HMI technology by proposing next-generation native-based software solutions incorporating the most advanced technology. These solutions create solid foundations for longterm investments, without compromise, offering openness and integration never before imagined in the world of automation. The Platform has been designed to offer an all-rolled-into-one modular and flexible work environment for design engineering and distributing industrial software applications for managing field communication, data collection, HMI interface Graphics, supervision, Historical analysis, business productivity efficiency calculations, maintenance management, event notification management and much more.

The software solution for Industry 4.0

The possibility for factory devices and for ‘things’ to communicate and cooperate with each other is the basis of Industry 4.0 and IoT for Smart Factories of the future. The Platform. NExT™ technology offers manufacturers and design engineers the chance to significantly increase efficiency, quality and flexibility. Movicon.NExT™ is a counterpart of Platform.NExT™ and offers an intuitive configuration environment to facilitate the process of creating even the most complex projects. System function models including those designed by third parties can be integrated in the platform for inter-project use. Configuration, communication, visualization, data logging, analysis, security, control and information distribution are provided at all company levels, locally or geographically distributed. All in one platform that offers the advantage of both total integration and plug-in modularity.
The Automation Platform.NExT™ technology integrates automation systems at all enterprise-wide levels with the most innovative and modern software technology.

- **Scalability** Automation Platform.NExT™ has been designed to guarantee maximum scalability. It offers an all-in-one development environment for modular solutions that are flexible and easy to integrate within the platform. The scalable Platform.NExT™ architecture is remarkably cost effective, reduces development time and offers unlimited modes of deployment.

- **Openness** The Automation Platform.NExT™ technology is based on the “plug-in” concept, allowing maximum interoperability with systems to integrate new functional models within the Progea framework for fully customizable .NET solutions. The graphics environment is based on WPF and supports powerful external tools such as Expression Blend for creating XAML graphics. The powerful and integrated VB.NET language standard guarantees a wide range of customization.

- **Security** Automation Platform.NExT™ guarantees the maximum level of security. In addition to the user management, other solutions are provided that embrace the approach to using alternative security models offered by preferred providers.

- **Standards** Automation Platform.NExT™ is completely based on market standards providing openness and reliability. The XAML and WPF technologies guarantee the most effective and modern graphics standards. Historical logging technologies based on MS SQL Server and Azure with transparent support to all other relational databases. The project files are XML standard based. The powerful language is VB.NET syntax standard based. Communication is OPC UA based in addition to various integrated protocols.

- **Performances** Automation Platform.NExT™ emphasizes performance management. Fast communications, real-time data management and graphics optimization that make full use of graphics accelerators and DirectX, guarantee maximum technology without sacrificing performances.

- **Connectivity** The Automation Platform.NExT™ Information Model is based on the innovative OPC UA technology. This guarantees maximum native connectivity to any device or application module based on this technology which offers unbeatable features for security and performance. The I/O Data Server module offers a significant number of free native I/O drivers, that provide direct connectivity for devices with proprietary protocols such as Siemens S7, Rockwell, Modbus, Omron, and others. The platform’s Client/Server architecture has been explicitly designed to unite IT and decision-makers with information from all production companies.

- **Database and Cloud** Platform.NExT™ permits efficient storing of all data managed by the Server. The Virtual File System (VFA) technology provides data abstraction of persistent data. Data is recorded in MS SQL format for default and predisposed connectors for Oracle and MY SQL databases can be used as well as Cloud technology such as Microsoft Azure.

- **Web-enabled** Platform.NExT™ is a platform that makes the web-based system access concept an unmatched benchmark. Web-enabled project creation becomes extremely simple and effective when using the Web Server module with HTML5 technology to ensure maximum multiple cross-platform and operating system portability due to the standard, maximum performance and graphics offered.

- **Engineering** Automation Platform.NExT™ proposes an extremely innovative and particularly pleasurable work environment with a rich and intuitive set of features. The platform is completely based on the new technologies which can be used for quick and effective project realization. This can be easily done by using the various wizards and templates, symbol libraries and toolbox. All of which are unprecedented in terms of graphics quality and re-usability. The platform is based on the function modularity concepts that permit users to create and implement plug in function modules externally and integrate them in the platform.
The ideal ecosystem for Industry 4.0 applications

What makes the Movicon.NExT™ Scada/HMI technology so revolutionary?

Automation Platform.NExT™, from which Movicon. NExT™ was created, uses the best and most innovative technologies to ensure users gain new experiences and advantages in using supervision, HMI, control and plant intelligence systems never before imaginable. Even more so because the Movicon. NExT™ technology satisfies all the communication and interoperability market demands with IoT and Industry 4.0 orientation.

- **Plug-in Framework** The new Movicon.NExT™ technology is based on .NET code that uses the 64 bit system potentiality with a framework specifically designed to guarantee reliability, openness and performance. The platform uses plug-in models to guarantee full customization of modular systems and integration of new customized modules. The Movicon.NExT™ framework offers a rich suite of functional modules capable of guaranteeing rich and complete supervision and user interface solutions with total openness and expandability.

- **New Generation WPF and XAML Graphics** Movicon.NExT™ offers a new user interface concept that uses the latest generation of DirectX graphics acceleration to fully exploit the exceptional quality of WPF/XAML vector graphics technology in 2D and 3D. A diverse selection of new generation objects and Symbol libraries provides native support to the very latest multi-touch and Kinect user interface technologies with Windows™ 10 style and navigation.

- **HTML5 and Mobile Apps** The Movicon.NExT™ Web Server offers new generation Web Client solutions using the HTML5 technology for remote access to field applications with guaranteed performance and cross-platform integration. Furthermore, the Apps specifically are designed for smartphones and tablets allowing greater simplicity for accessing the web from mobile devices.

- **OPC UA and I/O Driver Connectivity** The Movicon.NExT™ is based on a client/server architecture using the information model defined by the OPC UA standards that exploit the WCF technology in the communication infrastructures. There are also a large number of integrated and native I/O drivers available in this model capable of managing communication protocols of all the most widely used automation devices (PLC, Netword, Fieldbus, tools, etc).

- **Performing Database and Cloud** Movicon.NExT™ uses the Virtual File System (VFS) to render applications independent from persistent data models. This enables the user to connect to relational databases (i.e. SQL Server), use cloud computing (i.e. Azure) or use normal XML files on disk for historically logging and archiving process or project data.

- **Users and Memberships** The Movicon.NExT™ security model is based on user login authentication with membership management to ensure maximum security and openness aimed toward integrating authentication systems from diverse providers.
Movicon.NExT™ has been designed on innovative criteria to drastically reduce development time that incur more than 80% of project engineering costs. Progea’s extensive research and development work combined with its vast experience in supervision software has enabled it to reach the highest level of quality and technology currently available in industrial automation software. Reducing development time is a major concern on most SCADA/HMI projects. Movicon.NExT™ is fully equipped with just the right tools to ensure that your work and time are safeguarded. The objective to provide a unique all-in-one platform has been realized with Movicon.NExT™, where ideas and innovation merge to create solid foundations of technology. As an all-in-one and therefore totally integrated platform, the use of plug-in technology also makes it modular and open to integrating plug in modules customized on the Progea Framework. This allows users to expand potentiality by customizing the system towards vertical solutions that go beyond the limited use of “closed” technology. The .NET technology enables users to expand further by using the fully integrated .NET assembly and user controls.

New software architecture concepts

Centralized, modular and distributed projects

The platform’s project architecture can be based on XML or DB (SQL Server). Projects can be centralized and accessible by any Client when using the DB. They can also be modular and structured on “Parent/Child” relational architecture to obtain a centralized or distributed system and in the Cloud as well.
A new user-friendly work environment based on WPF

The Movicon.NExT™ workspace is the result of continued Progea technology evolution derived from research conducted in software studies combined with the vast experience of a company that has always valued feedback and suggestions from thousands of design engineers all over the world. The Movicon.NExT™ configuration far exceeds any other product for simplicity of use and intuitiveness which has been made possible with its intelligent editors and auto-configuration tools, wizards, and tag importers. Movicon.NExT™ is easy to use for engineering automation projects with exceptional visual impact that also ensures your investments are safeguarded.
The Movicion.NExT™ I/O Data Server has been designed on extremely robust and reliable server architecture. The I/O data server engine manages real-time information by using the platform framework’s Address Space to handle communications, the gathering point of all the variables connected to the various field devices. The Platform. NExT™ I/O Data Server supports all data types, including those defined in the data server OPC UA – PLC Open IEC1131 specifications. This will enable users to define and customize their own data types, no matter how complex, in the way that suits their needs best and in a way that no other technologies around can currently do. I/O driver management is also based on this data model to handle specific protocol managements for field devices such as Siemens, Rockwell, Omron, Modbus, Profinet, Profinet, Konnex, EtherCAT, PowerLink, IEC870, IEC850 and others. Platform.NExT™ I/O data server ensures maximum interoperability. This has been achieved by implementing the OPC UA specifications for both client and server to support all the specification’s complex data. The Server is OPC Foundation certified and ensures excellent data notification performance and server independence from connected devices. Thanks to the new technologies, the system’s architecture can support highly efficient and structured data models. It is more than capable of drastically reducing time spent by engineers in the design phase by applying tags with information that is then propagated to connected objects. This allows for centralized properties making the use of tags a true global information center.

The platform offers a Server application capable of performing all communication and data management tasks. The Server can be run as service and data can be centralized for local or remote Movicon.NexT clients.
The Alarm management is integrated in the I/O Data Server model and is used to configure and manage the project’s alarm and event messages with maximum precision. It is an essential tool that keeps Operators constantly updated with a wealth of information on all ongoing plant system activities and situations. This information is vital and permits operators to interact appropriately where needed to reduce production downtimes to a minimum and improve efficiency.

The Movicon.NExT™ Alarm Manager introduces new alarm functionalities and typologies, extending the conventional method of activation on event by adapting to the OPC UA specifications and international norms. Alarm activation can now be triggered on value deviation or rapid data change events to promote a better way of managing systems with simplicity. The alarm manager is configured for default according to the ISA S-18 standard but is completely customizable to support ON, OFF, ACK, RESET and SHELVE events. All Areas and Severities are supported along with all the analysis and filter functions (by time, area, severity, period, etc.) are supported and dynamically linked with help. The Alarm Manager also records each individual alarm and message as well as system events on the Movicon.NExT™ DB or Virtual File System (VFS) Cloud to enable their complete traceability. In this way, the Alarm Manager module can therefore guarantee the Historical Logging of events independently from the data format used and from the local, remote or cloud collocation.

The Movicon.NExT Server offers a powerful OPC UA, AE compliant Alarm and Messaging management

The Alarm Dispatcher is the Movicon. NExT™ module for sending Alarm and Event notifications to operators

Unmanned or partially manned plant systems ensure information is supplied quickly to on-call duty staff to avoid unnecessary prolonged production downtimes. This is one of the reasons why all the project alarms can be configured to immediately notify predefined users. The Alarm Dispatcher is the Movicon. NExT™ component used for sending instant alarm and event notifications to operators by SMS or e-mail. It is indicated for systems that must stay continuously connected (i.e. local network or Web). Notifications can be sent to specified users or user groups. They can also be customized to manage the dispatching of notifications according to specific set times, calendar dates, work shifts or on-call duty work shifts.
It is essential that every modern production system ensure correct and efficient data recording to enable efficient analysis of crucial information to aid productivity improvements. The Movicon.NExT™ Data Persistence module uses innovative criteria to record historical data to archive plant system data on a database, hard disk, or Cloud with everlasting performance and security guaranteed independently from data volume. The Server offers two data recorder models: The Historian model and Data Logger model that allow design engineers to configure their projects perfectly in line with their analysis requirements. The Historian model is used by the Server module implements the Historian model to record data on event (Time Series’ data type) to allow easy project adaption to client needs without wasting time.

The Data Logger model, however, is used by the Server module to record data, on time or on event, in database table columns. This is typically used for production traceability or report management systems. This module offers the design engineer the advantage of being able to freely configure their projects and database storage as required. One or both of the models provided, can be used in function with the analysis type to archive any data. The properties of each individual Historian prototype can be defined and configured with specific recording criteria (on event, change or cyclic), the value type to be sampled, (absolute, percentages, etc.) and data destination. Each individual tag defined in the address space can then be associated with a Historian model to create its own simple and flexible archive configuration. The Historian recording engine uses advanced compression algorithms that promotes increased performance for recording massive volumes of data. Thanks to the Progea Virtual File System (VFS) technology, the data persistence model integrated in Movicon.NExT™ enables project independence from servers and database formats so that users can define where to archive data independently from their project. Data can be archived locally on file, in a relational database (Microsoft SQL Server is the default and built in support for Oracle and others), or in the cloud, using the cloud computing technologies (i.e. Microsoft Azure).
Movicon.NExT™ uses the WPF graphics engine and the DirectX graphics accelerator together with a graphics editor and new libraries, containing objects and symbols of the latest generation, to offer graphics with remarkable quality. Design has now become an essential component of a product's success especially for software applications dedicated to user interface and supervision. Even though the earlier technologies used in rival products have been updated, they are still based on the Winform and Graphics Device Interface (GDI) technologies. Even today they continue to implement such technologies in solutions design engineered in the 90’s that are incapable of natively exploiting all the powerful features offered by the Windows 10 OS core system and the latest generation of modern hardware. Movicon.NExT™ uses the new Windows Presentation Foundation (WPF) technology, the graphics engine for tomorrow’s applications, designed to change the way of thinking and user interfaces today.

The Client Module: Movicon.NExT™ revolutionizes the world of HMI technology

The platform offers a Client application whose task is to visualize all data for the project’s graphical HMI interface both locally or distributed

New vector graphics rendering engine and new graphics libraries based on WPF and XAML

Movicon.NExT™ uses the WPF graphics engine and the DirectX graphics accelerator together with a graphics editor and new libraries, containing objects and symbols of the latest generation, to offer graphics with remarkable quality. Design has now become an essential component of a product’s success especially for software applications dedicated to user interface and supervision. Even though the earlier technologies used in rival products have been updated, they are still based on the Winform and Graphics Device Interface (GDI) technologies. Even today they continue to implement such technologies in solutions design engineered in the 90’s that are incapable of natively exploiting all the powerful features offered by the Windows 10 OS core system and the latest generation of modern hardware. Movicon.NExT™ uses the new Windows Presentation Foundation (WPF) technology, the graphics engine for tomorrow’s applications, designed to change the way of thinking and user interfaces today.

The Movicon. NExT™ uses XAML-based vector graphics that excel beyond the restricted use of conventional graphics. Supporting 2D and 3D graphics and equipped with revolutionary and dynamic functions, that outdo the limited use of current products, users can now express their creative side to the fullest. All the symbol libraries have been created using the XAML techniques to offer a rich selection of quality objects and symbols to facilitate design engineering. HMI interfaces can now be achieved with high impact visualization in less time than ever before. With Movicon.NExT™ being so open you do not need to be a XAML expert in order to create symbols and 2D and 3D designs externally and implement them internally using the powerful features of the XAML graphics and the Movicon.NExT™ real-time engine.
Movicon.NExT™ offers support to dynamic 3D graphics displays with XAML technology. Screens can display 3D models imported or selected from those included in the platform. Various advanced functions are provided to enable the design engineer to animate graphics with 3D model components and define sequences of rooms containing different 3D scenarios for viewing along a trajectory. The user can interact with dynamic real-time system data using 3D graphical components to create tri-dimensional and interactive user interfaces. The new graphical experience will empower users with the freedom to design mixed 2D and 3D solutions by using predisposed dynamic functions to associate objects with real-time information. At the same time users can freely create and integrate their own XAML designs to expand the library contents. No matter if simple and minimalistic or detailed and realistic, spectacular 2D and 3D graphics with astounding special effects can be created as desired by the design engineer. In addition, the resulting screen graphics will always be independent from the local screen or web screen resolutions.

- 2D and 3D vector graphics with DirectX10 support
- Rich library of symbols and XAML objects preconfigured with top quality graphics
- Built-in XAML graphics editor
- Graphics importing from XAML and 3D models
- Supports all touchscreen functions needed to manipulate objects in Runtime
- Centralized symbol repository
- Templates and Symbols
- Full support of all multitouch functions
- Kinect (voice and gestures) support
- Native Windows 10 tile interface and automatic project navigation support
- Widgets and swipe pages
- Isometric and engineering Symbols
Progea has invested significant resources to engage designers on a complete redesign of the product’s XAML-based symbol library and toolbox of objects to exploit the most modern graphics solutions using different styles and storyboards. Users can deploy a rich variety of high quality graphics never seen before in SCADA/HMI, all included in the platform and contained in the object and symbol libraries for a wide range of industrial use. Users can expand their design creativity with a library rich in high quality static and dynamic symbols plus a toolbox of graphical objects, including pre-configured complex objects. Combining these with a powerful integrated vector WPF graphics editor empowers designer creativity with extended technical capabilities to enhance transparency, fading, shading and shadow effects. In addition to the Movicon.NExT™ graphical object libraries, this platform provides users with ample freedom for graphical expression with XAML. This allows new symbols and objects to be created using Microsoft Blend graphics, dynamic use of storyboards, and full support to user control customized with Visual Studio.
Powerful integrated features for a new engineering design experience

**Alarm visualization in Movicon.NExT™**

The Alarm Window and the Historical Log Window are active alarm visualization tools and can be inserted as objects in any screen and configured just like other graphical objects from the toolbox. Alarm display objects can be built from symbols and templates that differ completely in style and can be added to the symbol library like other graphical objects. Movicon.NExT™ offers complete configuration of alarm visualizations and their operations, using either direct or customized commands. The display windows can be connected across networks where the display object becomes a “client” for displaying active alarms and historical logs originating from different network servers. Columns reporting alarm information can be configured to adapt to every visualization need. Among other interesting features, Movicon.NExT™ also provides users with the ability to instantly view histories of specific alarms and their occurrences. This is a great aid to simplify event analysis to improve productivity. There are all types of “sorts” and “filters” to help users obtain and display information transparently and intuitively.

**GeoScada and Telecontrol**

Movicon.NExT™ fully supports geographical map and cartography system integration to geo-localize dynamic objects to be displayed on maps. The GeoScada function is used to define the geographic coordinates of specific screens or projects so that pins and the desired information can be dynamically displayed on maps. It also supports other evolutional functions such as zooming and panning, object interactivity, trajectories and dynamic paths, grouping and pop-up windows. This feature offers a simple way to distribute information over territories that can be browsed and zoomed by operators using the map system interchangeable within any Movicon.NExT™ project. The maps are very handy for operators to identify the operating status of assets distributed locally over the territory by allowing rapid geographic collocation of dynamic information and their position.

**Multilingual text management with online translation**

Each Movicon.NExT™ project can contain an unlimited number of text strings in any language to localize the project with any language or character set (Unicode also includes UTF-16 code for Asian and Arabic characters). Texts strings are managed in the project’s string table which is fully compatible with the Copy and Paste functions used directly from the MS Excel™ editors. Powerful built-in text management tools are specially designed to manage text faster, such as the automatic text translation of languages used in the project. Any language can be changed and activated instantly, whether in Editor or Runtime mode. Specific languages can be activated for specific users when logging on and system fonts will adapt accordingly to the changed language. The Movicon.NExT™ projects are therefore truly international.
Movicon.NExT™ Viewers for complete data analysis

Among the tools available for use on the Client you will find powerful viewer and data analysis objects that display and analyze historical data recorded by the Server module independently from the DB format and data storage localization. The vast number of objects contained in the Movicon.NExT™ HMI toolbox allow connectivity to databases in order to display and manipulate the connected data tables. Trends, Data Analysis, Charts, Combo Boxes, Lists, Grids and many other controls can be used to build any interface to display and manipulate historical data and DB tables.

Trends, Data Analysis and Charts

Sophisticated Trend objects allow data to be accessed and represented in curves to show process data behavior. The Trends can be both dynamic and historical (run-pause) and provide sophisticated features for representing values graphically along with ample pen and legend customization. They allow data to be represented by time/date range or other data filter types. They also allow data zoomed, pen selection, logarithmic scales, fit-onto-one-page graphics, printing and much more. The Trends also can be configured in Runtime and the VBA feature provides maximum configurability to allow users to create their own powerful Trend Template objects. The Data Analysis objects have been extended to provide more sophisticated modes to perform effective analysis exclusively on historical data with chart representations. The Data Analysis objects allow users to apply fast analysis according to prefixed time/date ranges using comparison and overlapping curves. This includes, for example, analysis with sampling curves or different period comparisons (e.g. comparing values from one year to those from a previous year). Measures can be performed instantly by tracing lines between different chart points to obtain difference in values. The Charts are used to display data array values in curves or arches in both 2D and 3D.

Grids and DB Connectors

DB objects have been provided in Movicon.NExT™ to ensure that projects are created with the capacity to manipulate data directly within the database. They have been configured to display and manipulate data from databases connected by means of using the Data Grid, Combo Box and other DB connector types. Movicon. NExT™ provides users with all the tools they will ever need to create user interfaces where graphical objects can also be connected directly to DB tables.
This function and command scheduler server module has been purposely designed to make object configuring extremely easy and functional to perform specific functions according to a time schedule or planned expiry date. This module functions as an independent server within the platform, and receives commands to activate and deactivate according to scheduled times (repetitive or cyclic, preset date and time) both in develop and runtime mode. Configurable operations can also be performed in runtime on the HMI client side using a predisposed graphical object that is available from the Movicon.NExT™ toolbox.

Movicon.NExT™ offers an extremely advanced server module to manage recipes by allowing the user to configure the archive management to function asynchronously to the address space. The configurator allows Recipe objects to be managed and composed and configured on the HMI Client or independent device. Functions have also been included for downloading and uploading recipe data in “atomic” mode. This has been possible by implementing functionality dedicated for this purpose in the Data Server’s I/O drivers.

Movicon.NExT™ provides plant production and maintenance managers with an indispensable tool that can statistically analyze downtimes that occur during production runs. The alarm analysis (alerted downtimes) permit fast detection of critical points in the production process so that improvements can be made to maximize system efficiency and productivity. Without this information it would be difficult to improve productivity efficiency. The Movicon.NExT™ Downtime Analysis module is extremely simple to use and offers a powerful tool for analyzing of production downtime events. This analysis can be displayed in reports according to total or partial downtimes, or downtime event frequencies. Information can be represented in table format, pie charts or histograms to individualize lists of alarm events and their classifications by “duration” (total time of all events of the same type) or by “frequency” (total number of occurrences of the same type) according to the preselected time range or period. These reports can be displayed or printed on command or on event and exported in various formats (Excel, PDF, HTML) and provide all the information and details of each alarm analyzed. The module’s reports can be freely customized and adaptable to different plant system needs such as allowing cross sectional analysis with Downtime data and Production data. The Downtime Analysis module can also be accessed via the Web.
The Movicon.NExT™ Report Manager module offers a complete and integrated solution for creating and displaying powerful analysis and presentation reports

The built-in powerful Report Manager offers Movicon. NExT™ users a powerful and flexible tool for generating, performing and distributing data reports to cover any data analysis requirement no matter how sophisticated. The analysis is performed on data recorded by the Data Recording Server module using the Historian or Data Logger. Analysis and Reports can also be performed on any source of data even by connecting to existing relational databases of any type offering the maximum flexibility possible. The reports Designer offers a visual object-oriented interface that enables the user to create Reports following a short step-by-step procedure or wizards and templates. By using the Report Manager, based on .NET technology, the user will be able to create powerful visual reports intuitively by using the tools provided in the toolbox. Once the data source has been established (i.e. database tables) the report can be easily built using fields, tables, statistics and 2D and 3D graphics. All types of analysis tools are supported such as multi-level filters, grouping and sort by, calculation or formula functions, Reports Master and Sub-Reports. The user can display, print or export their reports which support all export formats such as PDF, HTML, RTF, XPS, or Excel XLS and XLSX formats. A navigation tool has been provided to manage complex reports by mapping them in tree structure according to hierarchy for users to view. With Movicon.NExT™, users will be empowered by the unmatched features of the Report Manager to make their business more successful.

Web Reports

The Web Reports module functions which are supported by the Web Reports Module. When projects are published via the Web using the Web Server module, the report will be displayed via the Web using Movicon. NExT™ HTML5 technology.
The Movicon.NExT™ applications ensure the maximum level of security and reliability. The complete and robust users and password management, has been designed explicitly to guarantee that conformity to the stringent security norms is an integral part of project design that is achievable with simplicity. Movicon.NExT™ guarantees maximum data and system access protection managed with 9999 user levels which can be managed in groups and 32 access areas. Project users can be shared with Windows™ domain users with the option to centralize user profiles. All the necessary security criteria are fully integrated and configurable with a few clicks, and include features such as electronic signatures, unauthorized access attempt control checks, password expiration, automatic log-offs and audit trail management. In addition, Movicon.NExT™ offers the ability to define protection levels and user traceability directly in each tag, independent from the associated commands.

Users and Passwords Management for maximum security

Movicon.NExT™ uses a sophisticated security system whenever someone tries to access the system by implementing a user authentication management based on memberships. With this technology, the platform ensures maximum security when using the user management by maintaining security provider openness. It is therefore possible to customize the user authentication management by customizing the security provider and using, for example, Windows Passport™ to integrate biometric recognition systems.

User Management

Movicon.NExT™ allows user profiles to be defined with mixed configurations among other project users, Runtime administrator users, Windows™ domain users and connected child project users. Users can also be associated with access privileges for actions and command functions and individually for project tags. The innovative Movicon.NExT™ user-management is more expandable and open than previous designs. Users can now be shared with different security management architectures using the membership feature.

Audit Trails

Audit trails can be applied to each data value and variation to record and report each change with the consequent values, time stamp and the name of the user logged on when the changes took place.

FDA 21CFR Part 11 and GAMP5

All 21CFR Part 11 requirements have been implemented for creating FDA and GAMP5 ready projects with simplicity.
Empowered by integrated VB.NET language

Project design openness with integrated VB.NET language

Movicon.NExT™ integrates a powerful VB.NET engine, capable of executing code compatible with the VB.NET standard (Visual Basic for .NET™), with a vast and powerful set of APIs. Not only are event and method properties provided to customize any type of system functionality, but they can be used to gain full access to your system’s .NET world. Scripts can be executed as normal routines or embedded in objects in response to events, such as the alarm, template or data logger graphical objects. The logic with VB.NET language can be executed on both Server and Client together with multithreading. This means that different VBA script can be executed simultaneously, offering unmatched solutions that no other system using standard languages can offer. The powerful debugger also provides step-by-step, breakpoint and other execution types.

Wizards and Automatic Project Engineering

Movicon.NExT™ provides design engineers with a vast variety of tools to help them create their projects faster. These tools include importers to the most popular formats and wizards that allow the more expert design engineer to use automatic procedures to create the functionalities required in the project.

New and Third Party Module Integration

The Platform.NExT™ technology, on which Movicon.NExT™ is based, has been purposely designed to be modular and scalable. In addition to the suite of function modules provided by Progea, users can also develop and add new modules in the platform of their own for creating vertical and integrated solutions. This gives users the advantage of using the platform’s functions to optimize their work, increase potentiality and reduce development time and management costs. Progea offers wizard models for MS Visual Studio to provide users with all they need for building their function modules in as little time as possible by using the .NET and C# technology. Furthermore, Progea can also provide documentation, SDKs and the necessary information to help user create their own vertical solutions to integrate with the Platform.NExT™ technology.

Function Block Diagram Editor

Movicon.NExT™ has a built in logic editor that implements the use of a function block editor to create sequential logic. This is an easy tool to use for creating logic in the supervisor without needing any programming language know-how. The Function Block library has all the main logic functions and includes PID controller blocks. It can also be expanded and customized. With the forthcoming runtime for Windows 10 IoT, it will be possible, for example, to create small microcontroller logic units that connect to the main supervisor to enable the realization of Movicon.NExT ecosystems in Industrial Internet of Things (IoT) architectures.
The true modern automation concept places emphasis on the necessity to access your automation system data from any point at any moment. Using the web to access, manage or view production process information, with total security, is essential to all users, maintenance personnel, production managers and company managers in general. The Web Server module is an excellent function designed to make remote access happen using the most modern and innovative web technologies of HTML5. The Movicon NExT™ configurator is used for creating the graphical interface displayed over the web independently and by HMI Clients. Communication is established through the I/O Data Server, or directly with OPC UA. The Web Server’s task is to manage local instances and publish data over the web. The Web Client stations permit command activation as defined on servers using the same adopted security for accessing commands. All access and commands are traced and recorded on the server’s log. In addition, Web Client station log on is completely independent from other stations, where other users can log on with different privilege levels using the multi-user concept. Purposely designed and native tools, such as the Dashboard, Grids, Data Analysis and Reports, allow direct access from the Web to the project’s historical logs on the Server.

- Enhanced performance and transparent support to project functionalities and commands using normal browsers
- Data management security
- Enhanced performances and event notification
- Enhanced communications based on Web Socket
- Multiplatform support, no software or license to be distributed or installed, application centralized on server side

Access and view project via the Web using any browser with any operating system with HTML5 technology support

Creating web pages on the server is completely automatic with a click of the mouse

Dynamic Server Project screens displayed using browser navigation with user login, access control plus option to restrict navigation on the web side

No need for additional installations or configuring on client or server

The Web Server: new concepts for expanding web-based functionalities
Remote access via Internet with HTML5 and Apps

Cross-Platform Visualization with HTML5

HTML5 is the standard that defines a series of technologies, which substantially include all the most recent technology innovations concerning web development and engineering web applications. By surpassing the usual constraints met in web technology the new HTML5 technology empowers you to define new semantic functions, storage, API for device access, Web Sockets, Web Workers, graphical solutions, multimedia and 2D/3D never thought possible before in standard and cross-platform technologies. By supporting this standard the Movicon Web Client technology is able to offer users true standard and cross-platform Web architecture which is portable on any PC, operating system, browser and mobile device. The advantage of having a cross-platform solution is that it permits project accessibility from anywhere with security and graphics rendering ensured. The solution based on HTML5 requires the server to partly process client data to guarantee performances while providing full interoperability in any platform being used at the same time. This is made possible by the fact that HTML5 is an open standard. To improve mobile system operability specific Apps are available for mobile devices based on Android OS, Windows Phone and iOS Apple. These high performing Apps facilitate and simplify plant access by smart phone and tablets that can be downloaded from the App Store.
Progea promotes and encourages active knowledge sharing. Users can take full advantage of the user community to exchange know-how, tips and advice as well as use the web tools administered by Progea to access a wide range of detailed technical information. Progea organizes user community events along with information programs and free training courses. The website provides forums, blogs, bugbase, knowledgebase, examples and much more for users to learn and share information.

Movicon™ Community

Progea as a company that has always given great importance to product quality by making it a central point within the organization at all levels. The entire company, including product development and validation processes, are System Quality certified according to the ISO 9001:2008 specifications with additional audits in compliance with the EN50128 SIL0 requirements. In addition, Progea guarantees excellent customer care services which they believe is essential for those working with critical automation processes such as process control and infrastructures.

Quality Control

The Total Cost of Ownership Costs (TCO) of a software platform is greatly influenced by the quality of its correlated services. Every user company is well aware that even the best products can induce indirect expenditure for the end user if not properly supported. Important parameters such as learning time, response time, quality services, even though not directly linked to product such as customer care, are generally considered the true added value of a software product. The relationship between product company and consumer in the software sector is ‘different’, it is considered a partnership. Movicon™ is designed on the simplicity-of-use criterion, correlated with complete documentation and website dedicated to support services and provided to enrich the knowledge of the developer community with useful information and examples to minimize their need to revert to the Technical Help services. Furthermore, Progea is unique in providing quality services that only a product company can ensure and provide. User training, technical help and customer care guarantee the support they need to confront and resolve any application need whether planned or unexpected, contributing to reducing installation and internal development costs. Progea is directly presented through and by its offices in Italy, Germany and North America, in addition to an international network which supports and guarantees the Movicon™ brand name worldwide.

Value-added services

Movicon™ is a well-known product used in automation by leading companies from every industrial sector and has more than 100,000 projects installed worldwide. As a demonstration of the Movicon™ product’s quality and reliability, Progea is honored for being chosen by the leading players in the industrial automation sector. The Progea technology is also used and distributed under a variety of brand names by international companies, including Phoenix Contact, Panasonic, ABB, Stahl, Bosch Rexroth, VIPA, Sutron and many more.

A solid partnership

Movicon™ Community

Progea promotes and encourages active knowledge sharing. Users can take full advantage of the user community to exchange know-how, tips and advice as well as use the web tools administered by Progea to access a wide range of detailed technical information. Progea organizes user community events along with information programs and free training courses. The website provides forums, blogs, bugbase, knowledgebase, examples and much more for users to learn and share information.

Quality Control

Progea as a company that has always given great importance to product quality by making it a central point within the organization at all levels. The entire company, including product development and validation processes, are System Quality certified according to the ISO 9001:2008 specifications with additional audits in compliance with the EN50128 SIL0 requirements. In addition, Progea guarantees excellent customer care services which they believe is essential for those working with critical automation processes such as process control and infrastructures.

Movicon™ Community

Progea promotes and encourages active knowledge sharing. Users can take full advantage of the user community to exchange know-how, tips and advice as well as use the web tools administered by Progea to access a wide range of detailed technical information. Progea organizes user community events along with information programs and free training courses. The website provides forums, blogs, bugbase, knowledgebase, examples and much more for users to learn and share information.

Quality Control

Progea as a company that has always given great importance to product quality by making it a central point within the organization at all levels. The entire company, including product development and validation processes, are System Quality certified according to the ISO 9001:2008 specifications with additional audits in compliance with the EN50128 SIL0 requirements. In addition, Progea guarantees excellent customer care services which they believe is essential for those working with critical automation processes such as process control and infrastructures.

Movicon™ Community

Progea promotes and encourages active knowledge sharing. Users can take full advantage of the user community to exchange know-how, tips and advice as well as use the web tools administered by Progea to access a wide range of detailed technical information. Progea organizes user community events along with information programs and free training courses. The website provides forums, blogs, bugbase, knowledgebase, examples and much more for users to learn and share information.
Progea represents more than 25 years of software technology excellence in every industrial automation sector

Progea offers open and flexible crossover solutions for various civil and industrial automation sectors. Our software platforms are installed all over the world to manage and control all types of automation sectors, which include:

- Food & Beverage
- Automotive
- Process Control
- Water Treatment
- Oil & Gas
- Infrastructure
- Manufacturing
- Energy