CGI Studio 3.11

Release Date: July 2022

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General 3.11

General Changes

This page describes general updates that were made to CGI Studio for version 3.11.

Documentation and Sample Updates

Newly added and reworked documentation about

- Axure RP Guide
- Multiple global State Machines tutorial
- New IVI sample & tutorial
- Updated Smart Importer best practices document
  - <CGI Studio root folder>\cgi_studio_docs\

MATLAB Connector (MLC) Improvements

Tool Improvements:

- Changed dialog windows to appear on the same screen as the main window.
- Changed generated code to use the MLC namespace.
- Changed HMI-Signal-Buffer to separate Output-Signal and Input-Signal processing to allow reduction of delays in specific use cases.
- Changed HMI-Signal-Buffer methods to be virtual to support custom modifications.
- Changed default compiler to Visual Studio 2017 (previously Visual Studio 2010)
- Added support for Toggle-Buttons to the Input-Panel.
- Added new “Generate Code” build option.
- Added build flags to configure MEX (MATLAB Executable) compiler settings.
- Added generation of additional meta-info for signals (Signal-Type, Data-Type) for enhanced logging capabilities.
- Fixed an issue where the port-type setting is being reset when the signal type is changed.
- Fixed Input-Panel build issues for 64-Bit systems.

Templates:

- Changed templates to support changes related to generated code.
- Added IPC integration. This allows the CGI-Application to run independently from the MATLAB state machine offering multiple benefits:

    - Improved stability due to separated processes.
    - Improved diagnostics as the console window of the CGI-Application is now visible.
    - Easier debugging as the CGI-Application can now be debugged normally.
    - Faster testing on target as target device can connect directly to MATLAB simulation.
    - Easy to integrate additional features like recording and replaying of signal data.

Documentation:

- Added “MLC IPC” chapter.

Extended Hardware Support

Additional support has been added for the following hardware,

- Extended platform support for NXP iMX8 Nano
- Extended platform support for STMicroelectronics STM32MP1 series
- Multiple display support for DRM/KMS devices

Candera 3.11

Text engine shaping on host and SceneComposer

HarfBuzz shaper got set as default shaper. HarfBuzz is a text shaping library which converts a sequence of Unicode input into properly formatted and positioned glyph output - for any writing system and language.

Controls 3.11

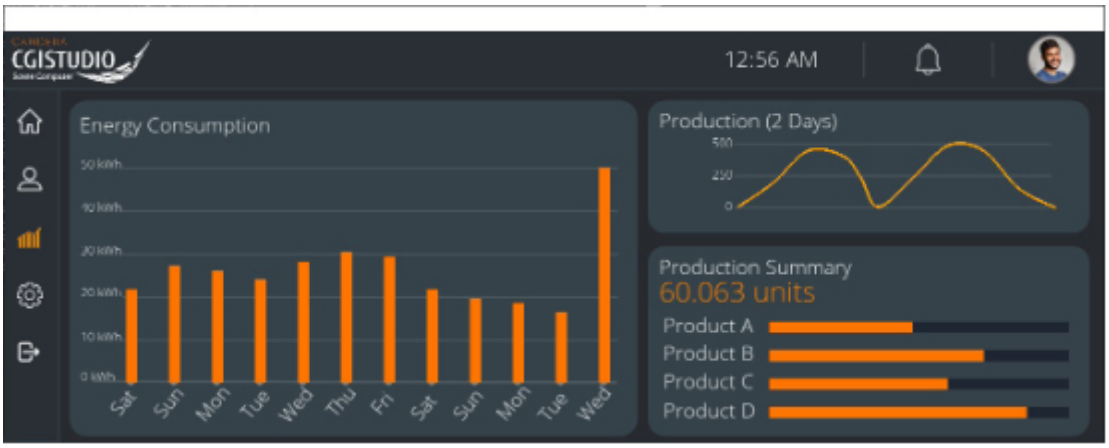
New Controls

BarGraph Control

This control is a graph that presents categorical data with rectangular bars with heights proportional to the values that they represent. Used to show comparisons among two or more categories.

LineGraph Control

A line graph or curve graph is a type of chart which displays information as a series of data points connected by straight line or spline segments.



Behaviors 3.11

New Behaviors

The following Behaviors have been added in CGI Studio 3.11.0:

- Bar Graph Behavior: Displays a list of values as a Bar Graph.
- Line Graph Behavior: The line graph behavior is used to draw a 2D line defined by a list of Vector2 elements.
- Set Text Style Behavior: This behavior sends change style action. Thus allows to control the style of text Nodes.

Modified Behaviors

The following Behaviors have been modified in CGI Studio 3.11.0: In CGI 3.11, there are two new properties are related to Partial Animation are added, SequenceStartTime and SequenceDurationTime in the following two behaviors.

- Configure and Play Animation Behavior
- Jump to Anmation Keyframe Behavior

SceneComposer 3.11

Changes

State Machine

- Support of multiple independent regions of the global state machine got introduced with support of bubbling events.
- Multiple global state machines can be shown and edited in SceneComposer.
- State names are inherited when converting from State to Subchart.

Animations

- It is possible to play an animation from a given start to a given end time.

Color Palette

- A Color Palette combo box has been added to the Color property. The combo box shows the color and name of the item.

HMI Report

- The HMI Report Customization Dialog has been updated.

Smart Importer

- Support of partial execution of animations
- Adobe XD format
- Direct import without converters of Adobe XD, Adobe Photoshop, Axure RP and Sketch
- Automatic sizing support
- Selection of empty bitmaps
- And many other smaller improvements
