

# FLEXSTAND



# Morten Pedersen

Chief Project Manager  
Test Solutions



- B.Sc.E.E, Aarhus, Denmark (1999)
- Telital R&D Denmark A/S (1999->2003)
  - HW and SW development on mobile phones test systems.
- CIM Industrial Systems A/S (2003→)
  - SW and HW development
  - Project Management
  - Resources Management
  - TestStand & LabVIEW certified



# Agenda (25 min.)

- Introduction to CIM Industrial Systems A/S
- Introduction to FlexStand
- TestStand API
- Application architecture
- Plug-ins (Templates, Palettes)
- Demo



# CIM Industrial Systems A/S

- Computer Integrated Manufacturing

- Test Solutions (15)



- Test & Measurement solutions

- Control and simulation solutions

- Software Solutions (10)



- Intranet and DB solutions

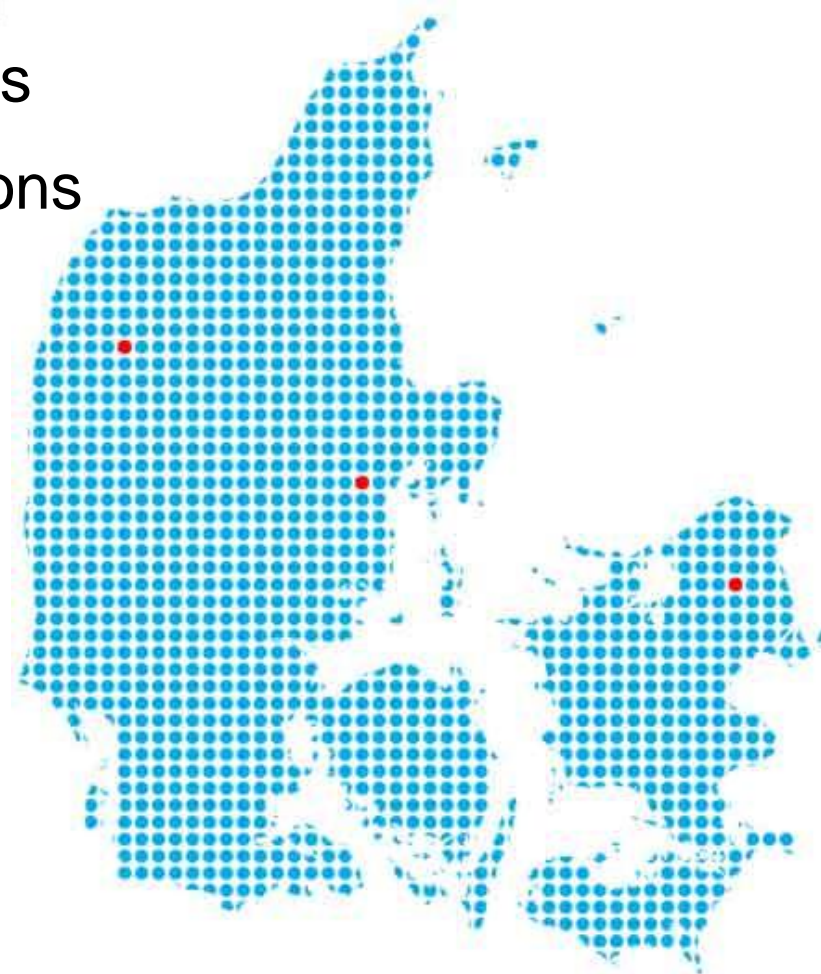
- Product SW developement

- Consultancy assistance

- Turn key solutions

- Software development

- Project management

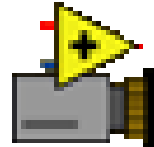
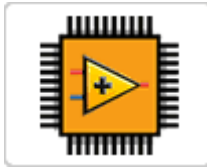


# LV and TestStand Services

Europe's Leading  
in NI LabVIEW and NI TestStand



# NI Technology knowledge in Test Solutions



CIM Industrial  
Systems A/S





# FLEXSTAND

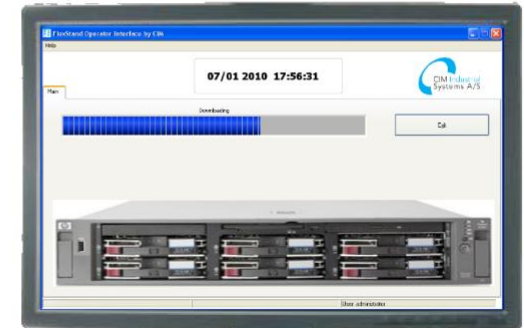
PCB test station



Final test station



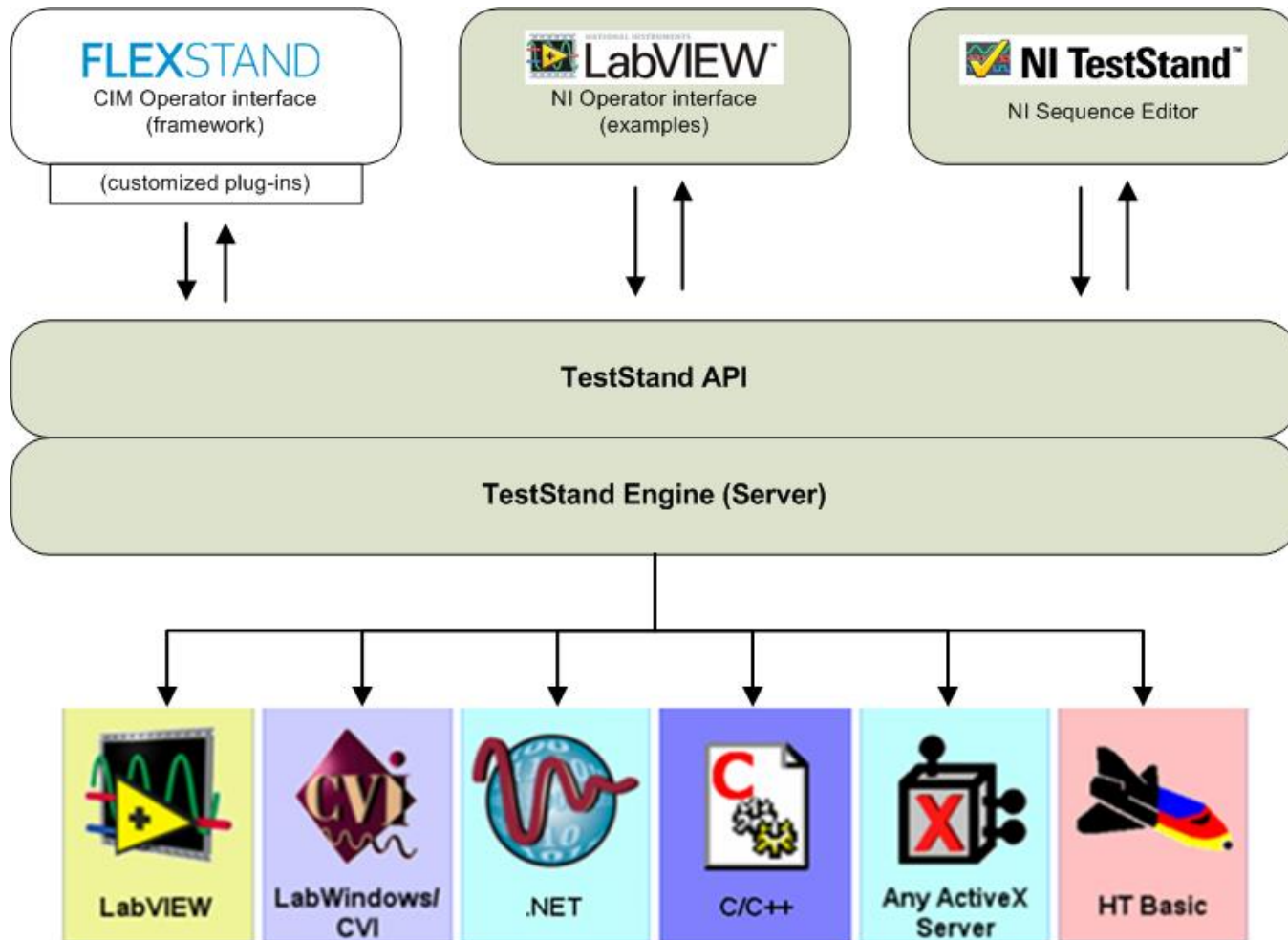
Download station



FlexStand framework loaded with different plug-ins



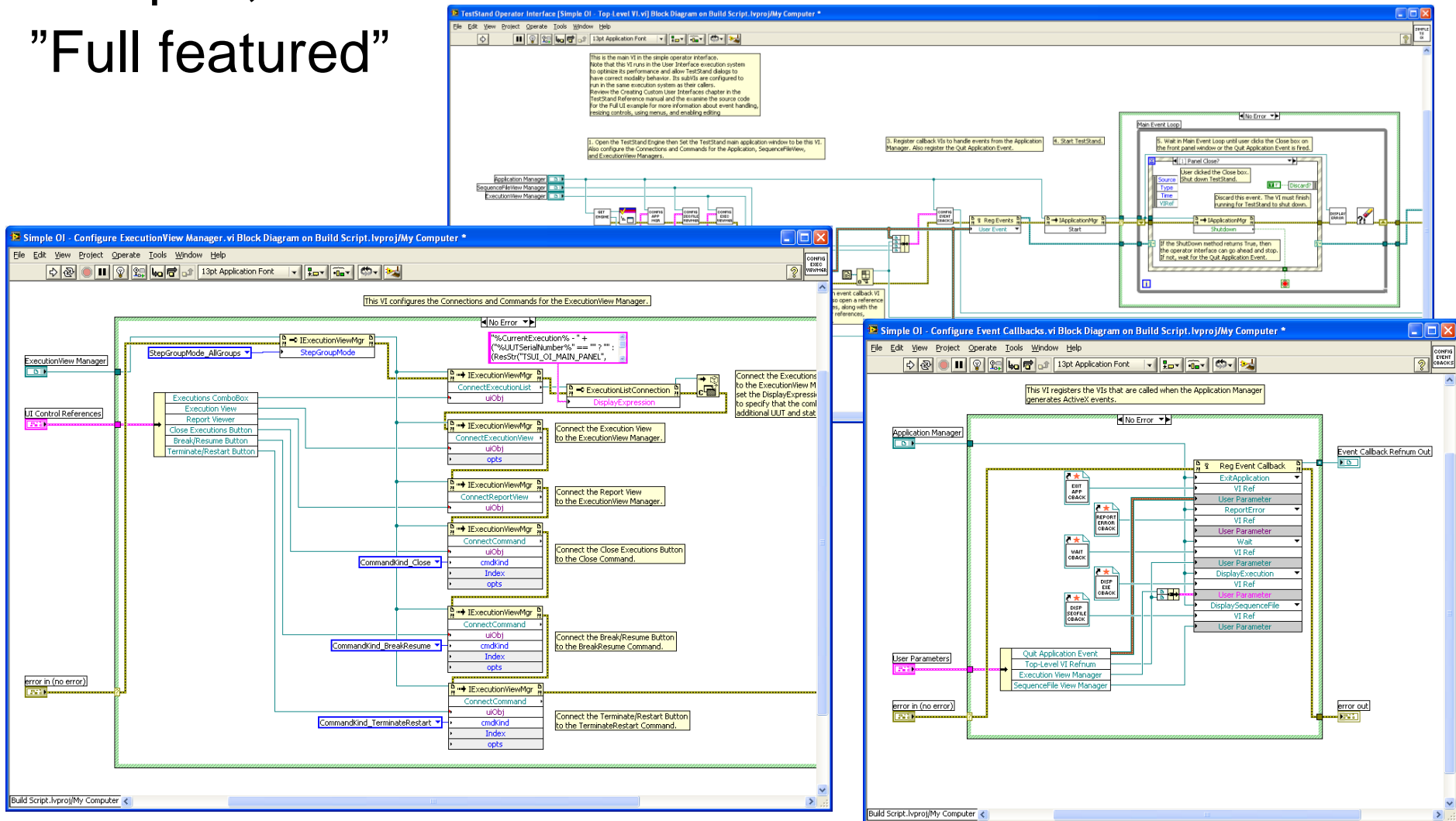
# TestStand and Operator interfaces





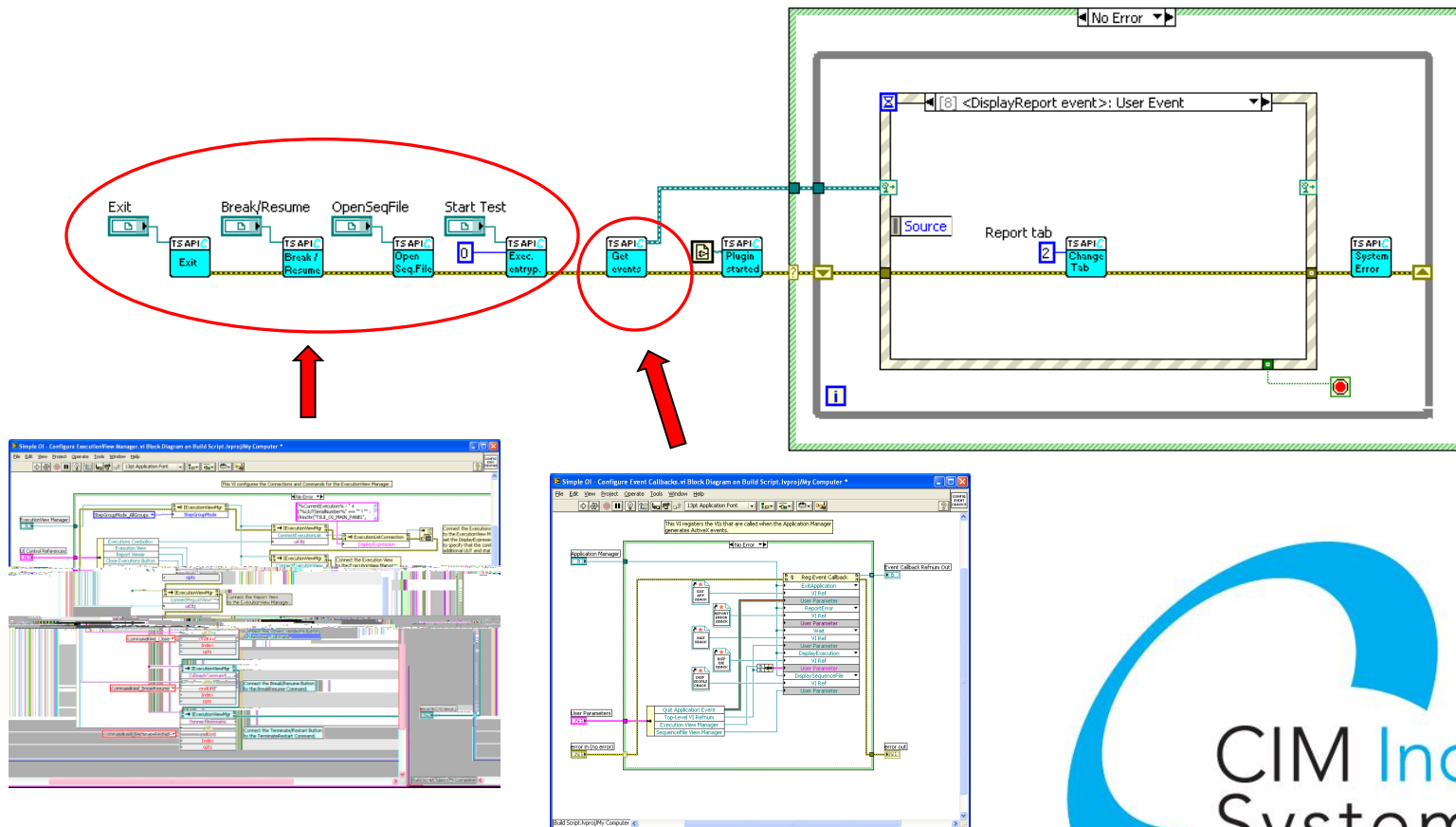
# NI TestStand examples:

"Simple",  
"Full featured"

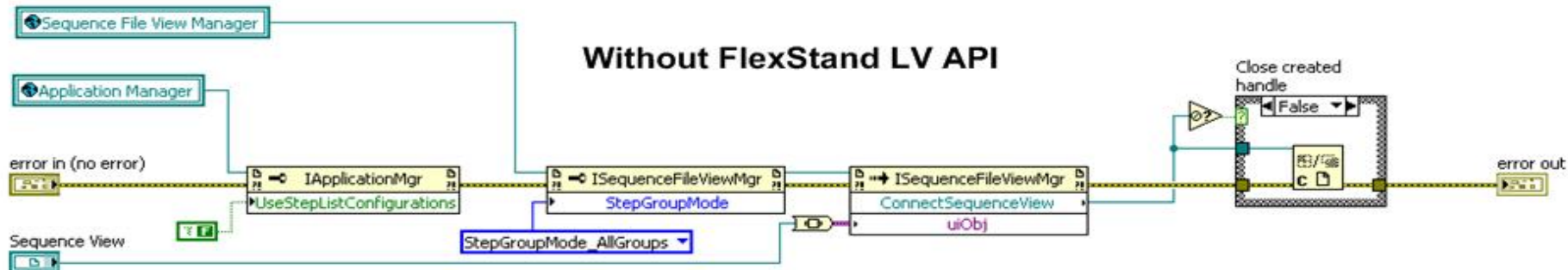
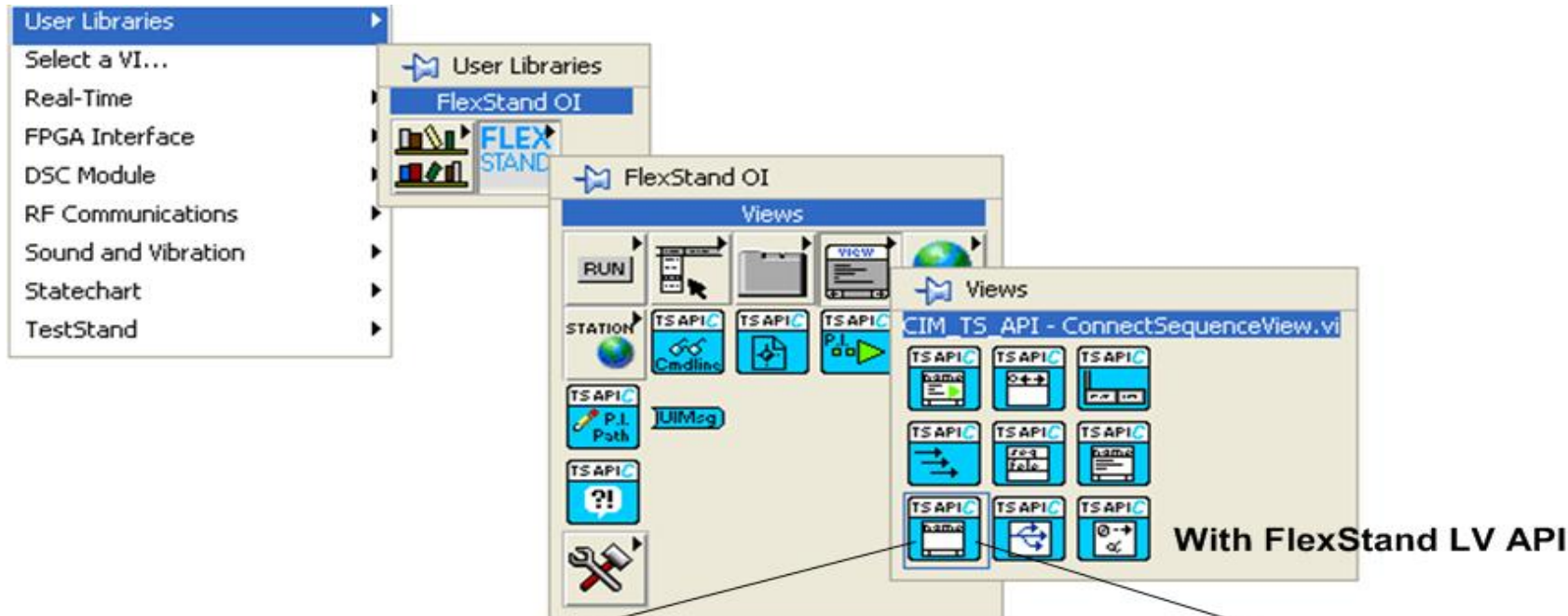


# FLEXSTAND OI API examples:

- Hides advanced TestStand operations in VIs with a simple interface



# FLEXSTAND LabVIEW palette



# FLEXSTAND OI Design

Diagram illustrating the FLEXSTAND OI Design interface components:

- Your menu:** Points to the menu bar (File, Edit, Configure, Help).
- Your tabs:** Points to the tabs (Main, Sequence File, Execution, Report, Instructions).
- Your logo:** Points to the CIM Industrial Systems A/S logo.
- Integrated dialogs:** Points to the "Passed" dialog box.
- Your main plugin:** Points to the main test execution area.
- Your bottom plugin:** Points to the status bar.

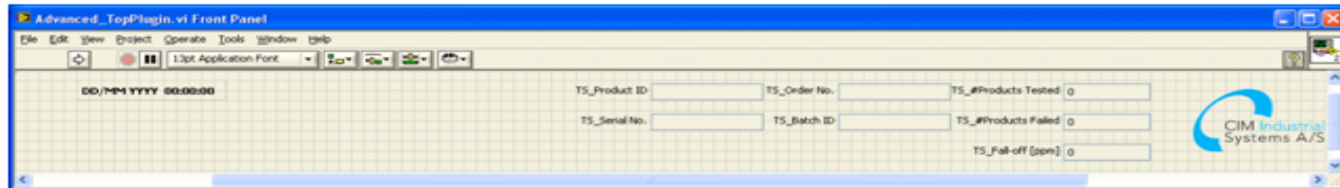
The interface displays a test sequence table with columns: Name, Low, Value, High, and Status.

Name	Low	Value	High	Status
Setup (2)				
Simulation Dialog				Done
Turn Vacuum Table On				Done
End Group				
Main (13)				
Powerup Test		True		Passed
PSU NoiseTest		True		Passed
RAM Test		True		Passed
Post URL to Instructions Tab				Done
IF				
CPU Test		True		Passed
ROM Test				Passed
Video Test	0	< 5	< 10	Passed
Keyboard Test	5	< 6		Passed
IF				
CPU Diagnostics				Done
ROM Diagnostics				Done
RAM Diagnostics				Done
Video Diagnostics				Done
Keyboard Diagnostics				Done
End				Done
Else				Done
Powerup Diagnostics				Done
End				Done
End Group				
Cleanup (1)				
Turn Vacuum Table Off				Done
End Group				

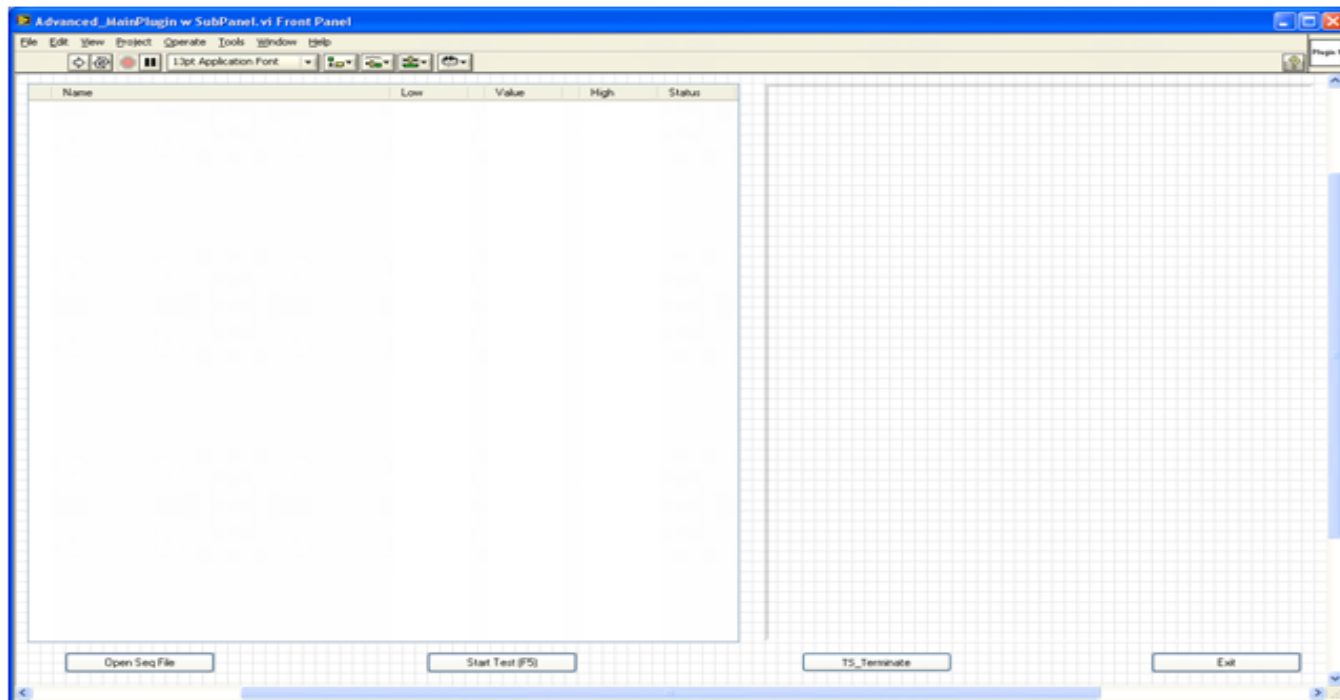
The main plugin area displays a large green "Passed" message, a "Scan Serial Number" field, a "Serial Number" field containing "354-652-1-8", and a photograph of a circuit board. Below the photograph are buttons for "Start Test", "Stop Batch", "Terminate", and "Exit".

The status bar at the bottom shows: FlexStand OI Demo - Advanced - Computer Motherboard Te... MainSequence, User: administrator, 100%.

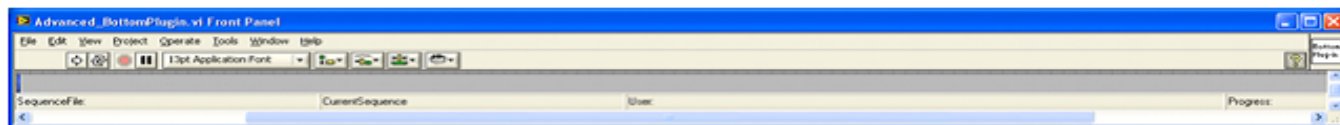
# FLEXSTAND OI Design



← Top plugin

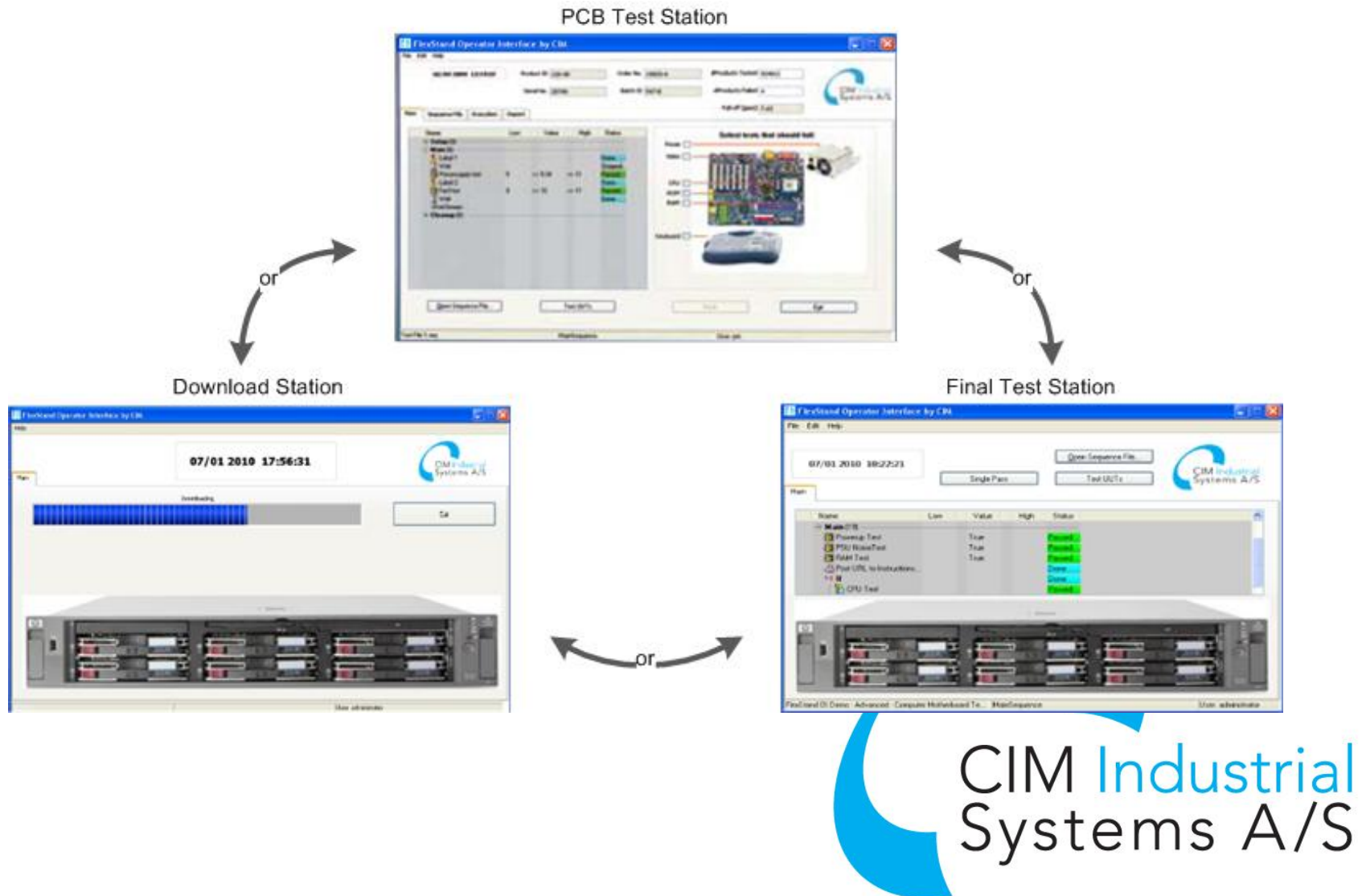


← Main plugin



← Bottom plugin

# Practical examples

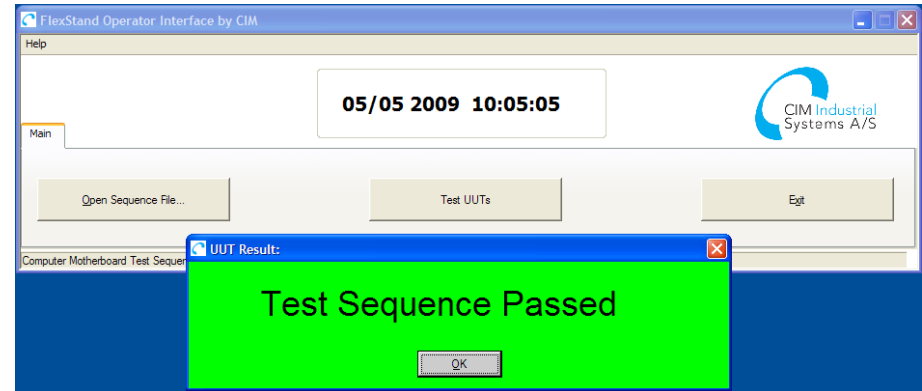
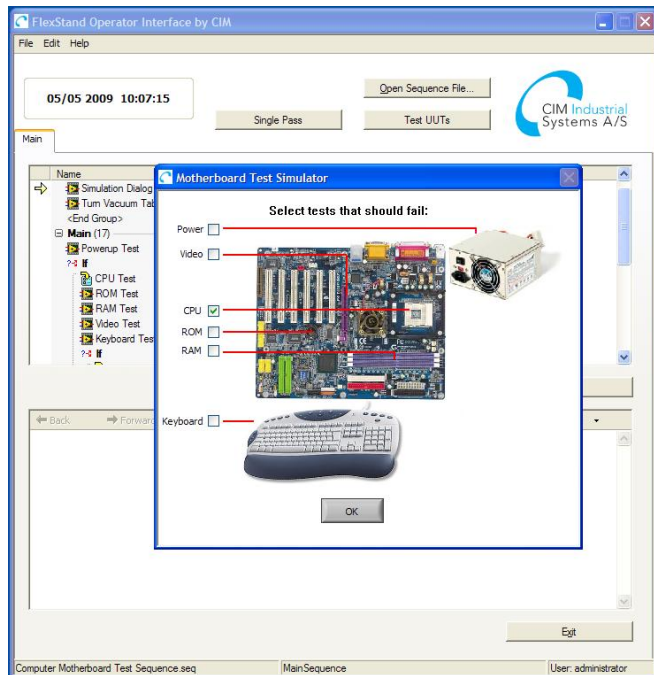




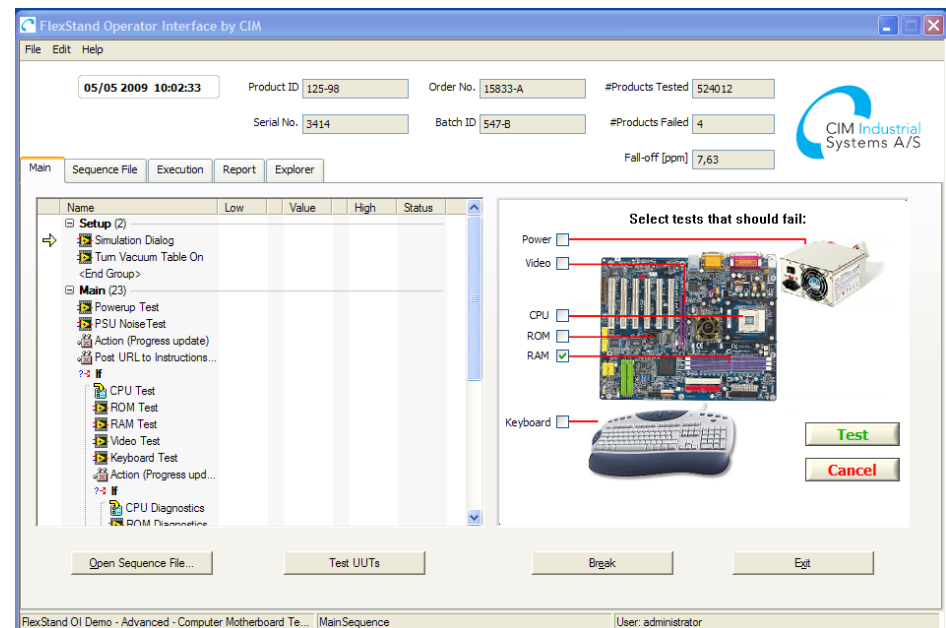
# Shipped examples

Simple

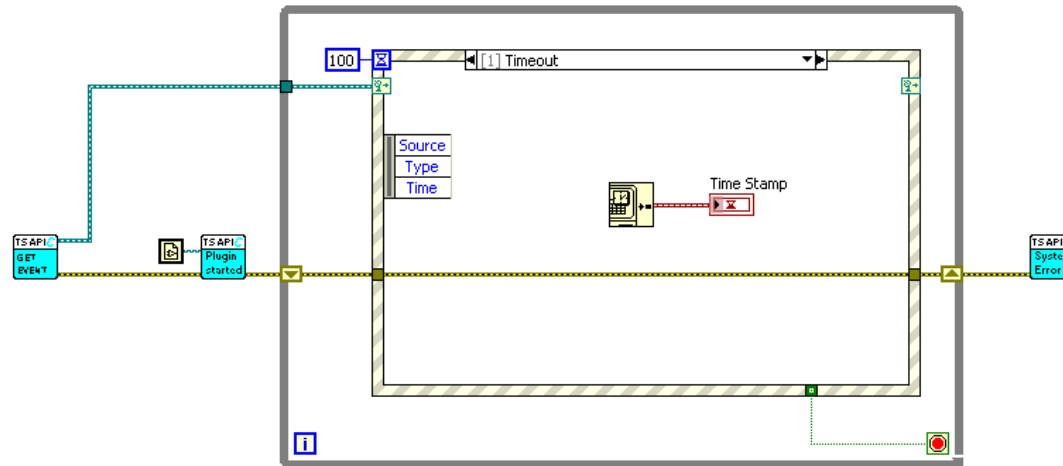
Standard



Advanced




# Demo 1



# See more at:

**www.FlexStand.eu**

**www.ni.com**



The screenshot shows the FlexStand website. The header features the 'FLEXSTAND' logo and 'CIM Industrial Systems A/S'. A navigation bar includes links like Home, Product Info, Download, Contact Info, About CIM, Buy License, My Licenses, and Login. The main content area has a blue background with the text: 'Simplify your test process by using FlexStand Operator Interface', 'Out of the box, Operator Interface for TestStand, based on evidence', 'Flexible – one API for all testers', and 'Encapsulation of TestStand API into LabVIEW VIs'. Below this is an image of a computer monitor displaying the FlexStand interface. To the right of the image, it says 'Not all faults look bad! Just think out of the box... FLEXSTAND'. Further right, it describes 'FlexStand Operator Interface: Build TestStand solutions by using simple LabVIEW VIs from CIM' and 'FlexStand TestView: Out of the box monitoring and control application for your devices.' The footer contains copyright information for 2009 by CIM Industrial Systems A/S and a Sitemap link.

**FLEXSTAND**  
CIM Industrial Systems A/S

Home | Product Info | Download | Contact Info | About CIM | Buy License | My Licenses | - | Login

Simplify your test process by using FlexStand Operator Interface

Out of the box, Operator Interface for TestStand, based on evidence

Flexible – one API for all testers

Encapsulation of TestStand API into LabVIEW VIs

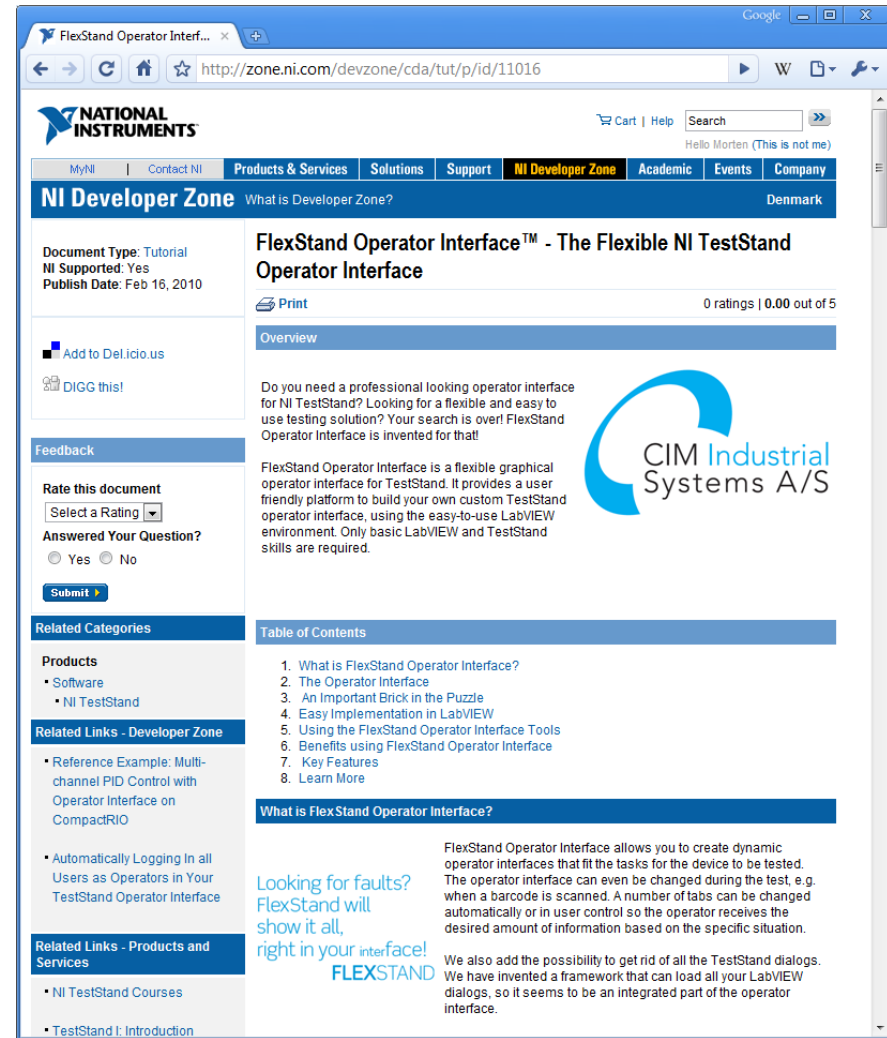
Not all faults look bad!  
Just think out of the box...  
**FLEXSTAND**

**FlexStand Operator Interface:**  
Build TestStand solutions by using simple LabVIEW VIs from CIM

**FlexStand TestView:**  
Out of the box monitoring and control application for your devices.

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[Sitemap](#)

<http://www.cim.as/>



The screenshot shows the NI Developer Zone page for the FlexStand Operator Interface. The header includes the National Instruments logo and navigation links like MyNI, Contact NI, Products & Services, Solutions, Support, NI Developer Zone, Academic, Events, and Company. The page title is 'FlexStand Operator Interface™ - The Flexible NI TestStand Operator Interface'. It includes a document type (Tutorial), NI supported status (Yes), and publish date (Feb 16, 2010). There are links to 'Add to Delicious' and 'DIGG this!'. A feedback section allows users to rate the document and answer questions. A table of contents lists topics like 'What is FlexStand Operator Interface?', 'The Operator Interface', 'An Important Brick in the Puzzle', 'Easy Implementation in LabVIEW', 'Using the FlexStand Operator Interface Tools', 'Benefits using FlexStand Operator Interface', 'Key Features', and 'Learn More'. The 'What is FlexStand Operator Interface?' section describes it as a flexible graphical operator interface for TestStand, built using LabVIEW VIs. It mentions that it allows for dynamic operator interfaces that can be changed during the test, such as when a barcode is scanned. It also notes that it can load all LabVIEW dialogs, making it an integrated part of the operator interface. The footer includes related links for products and services, specifically NI TestStand Courses and TestStand I: Introduction.

**NATIONAL INSTRUMENTS**

MyNI | Contact NI | Products & Services | Solutions | Support | **NI Developer Zone** | Academic | Events | Company

**NI Developer Zone** What is Developer Zone? Denmark

Document Type: Tutorial  
NI Supported: Yes  
Publish Date: Feb 16, 2010

[Add to Delicious](#)  
[DIGG this!](#)

**FlexStand Operator Interface™ - The Flexible NI TestStand Operator Interface**

0 ratings | 0.00 out of 5

[Print](#)

**Overview**

Do you need a professional looking operator interface for NI TestStand? Looking for a flexible and easy to use testing solution? Your search is over! FlexStand Operator Interface is invented for that!

FlexStand Operator Interface is a flexible graphical operator interface for TestStand. It provides a user friendly platform to build your own custom TestStand operator interface, using the easy-to-use LabVIEW environment. Only basic LabVIEW and TestStand skills are required.

**CIM Industrial Systems A/S**

**Table of Contents**

1. What is FlexStand Operator Interface?
2. The Operator Interface
3. An Important Brick in the Puzzle
4. Easy Implementation in LabVIEW
5. Using the FlexStand Operator Interface Tools
6. Benefits using FlexStand Operator Interface
7. Key Features
8. Learn More

**What is FlexStand Operator Interface?**

FlexStand Operator Interface allows you to create dynamic operator interfaces that fit the tasks for the device to be tested. The operator interface can even be changed during the test, e.g. when a barcode is scanned. A number of tabs can be changed automatically or in user control so the operator receives the desired amount of information based on the specific situation.

We also add the possibility to get rid of all the TestStand dialogs. We have invented a framework that can load all your LabVIEW dialogs, so it seems to be an integrated part of the operator interface.

**Looking for faults? FlexStand will show it all, right in your interface! FLEXSTAND**

**Related Categories**

**Products**

- Software
- NI TestStand

**Related Links - Developer Zone**

- Reference Example: Multi-channel PID Control with Operator Interface on CompactRIO
- Automatically Logging In all Users as Operators in Your TestStand Operator Interface

**Related Links - Products and Services**

- NI TestStand Courses
- TestStand I: Introduction

**Thanks for the time**

**[www.cim.as](http://www.cim.as)**

**Win an iPod at our booth**

