

The Evolution of SmartPlant Instrumentation

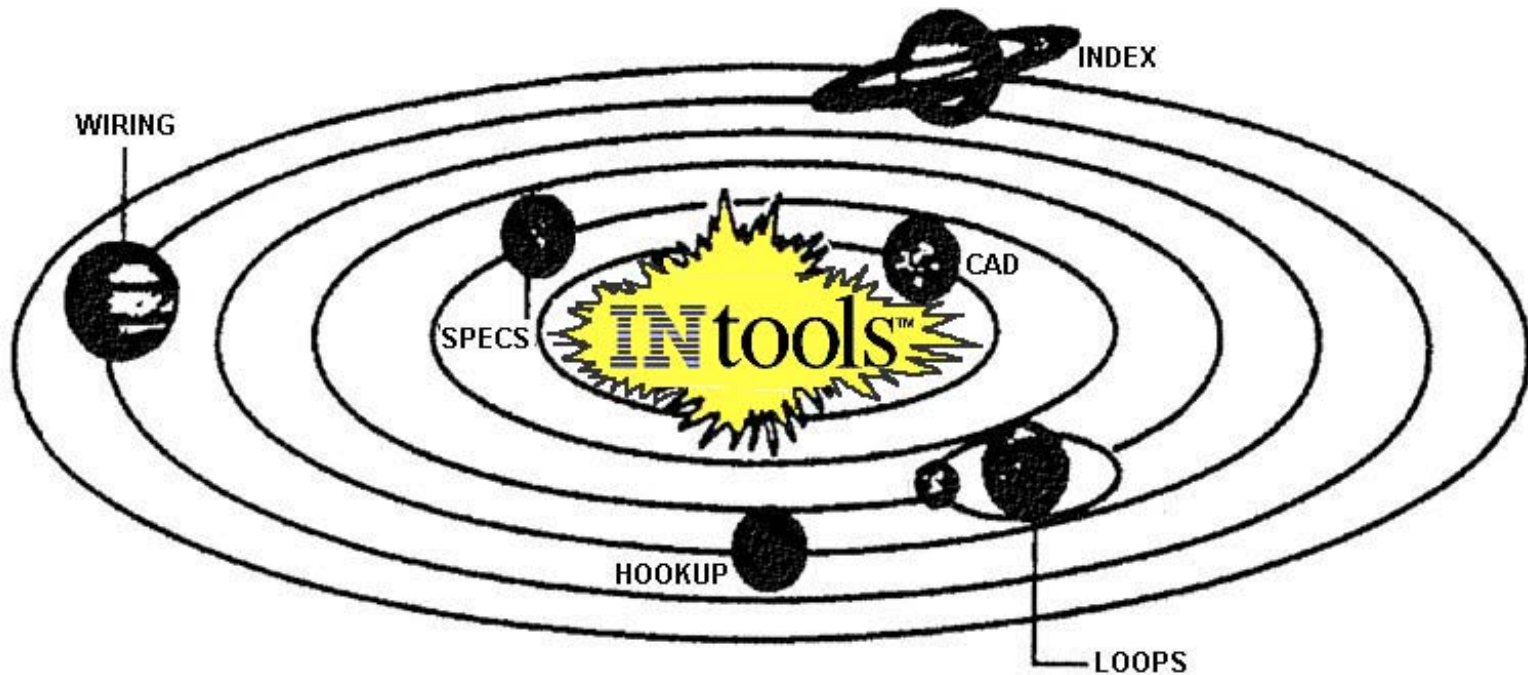


John Dressel
SmartPlant Instrumentation Application Specialist

FLUOR®

The Beginning

- In the beginning there was INtools and the known universe of Control Systems Engineering Automation revolved around it
- INtools was created in Israel by PID software in circa 1990



Excerpts from a 1998 INtools Presentation

- **INtools** is a Microsoft Windows based Application and uses the standard Windows Graphical User Interface.
- **INtools** uses ODBC compliant databases such as Oracle, MS-SQL and Sybase.
- **INtools** is more than an Engineering tool. It is also the plant operations and maintenance software used by Owner Operator companies.
- **INtools** has become the de facto standard for Control Systems Automation.
- **INtools** is being integrated with other Engineering Tools to create a data centric engineering environment..
- **INtools** is integrated to other applications, such as Fisher Firstview valve sizing, AutoCAD and Microsoft CAD systems.
- **INtools** is state of the art and supports evolving instrument concepts such as Communications, Fieldbus and ISA compliant datasheets.

INtools became the tool of choice for Control Systems Engineering

The Year 1999

FLUOR[®]

- INtools Version 4.1 came to America
- Fluor first used INtools on the Mobil Jose project producing Indexes, datasheets and AutoCAD loops
- **Intergraph acquired PID and INtools along with most of the original development team**
- Intergraph stops support of Instrument Data Manager (IDM)
- Intergraph renamed the Intergraph Global User Group (IGUG) to Local Technical Users Forum (LTUF)



INtools[™]

The Year 2000

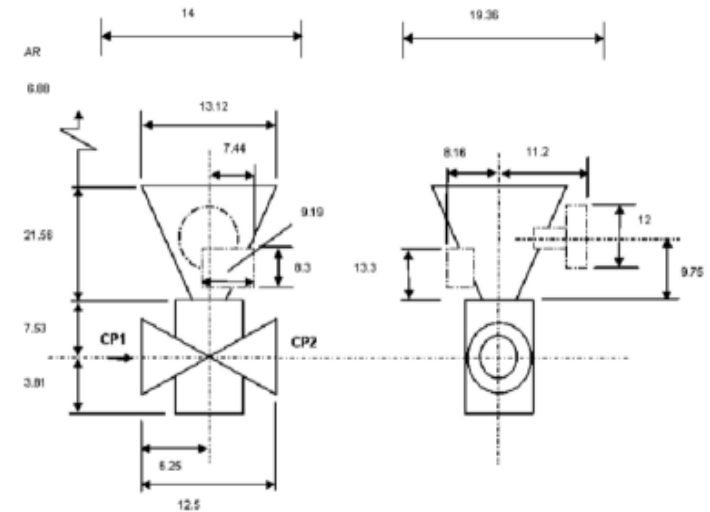
FLUOR[®]

- Intergraph exited the hardware business and became purely a software company
- INtools Version 5.2
 - First Intergraph version of INtools
 - Fluor had it's first INtools Summit



INTERGRAPH
INtools™

- INtools Version 5.3 Introduced:
 - Dimensional Data for Piping (DDP)
 - Ability to print Spec notes on a separate sheet
 - SmartPlant Electrical Interface
 - SmartPlant P&ID Interface
 - **Enhanced SmartLoop (ESL)**
- Regular LTUF Meetings started
 - LTUF Wish Lists started
 - LTUF CR Ranking started



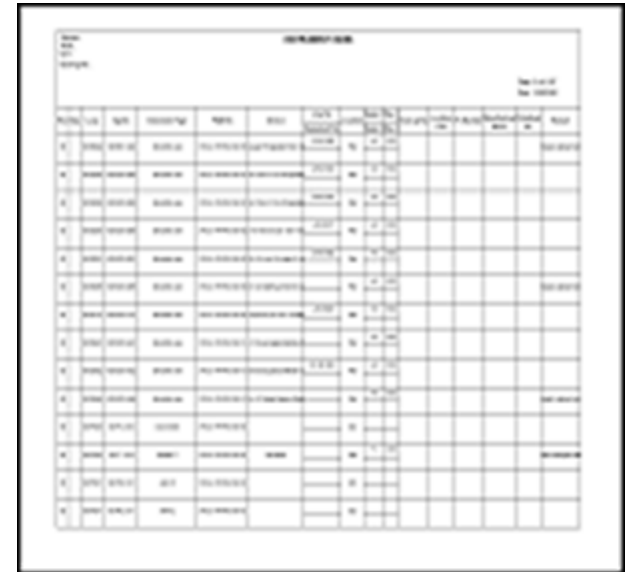
INTERGRAPH
INtools™

- INtools Version 5.4 Introduced:
 - Dresser Consolidated Relief Valve Interface
 - ABB DCS INtools Interface
- Enhanced Owner Operator capabilities allowed projects to be checked out from As-Built Domain
- LTUF Website went online
- LTUF Spec-Sheet Committee formed



INTERGRAPH
INtools™

- INtools Version 6 Introduced:
 - Tag Class added to Tag Properties
 - Integration of Index Browse into the Browser Module
 - Process Module - Multiple Process Data Cases
 - Calculation of Multiple Process Data Cases
 - SmartPlant Foundation Integration
 - External Editor for Spec Sheets and Process Data
 - Redesigned Graphical User Interface



ID	Name	Value	Unit	...
1
2
3
4
5
6
7
8
9
10



- Starting with Version 7, INtools® is known as SmartPlant® Instrumentation Powered by INtools.
- SPI Version 7 Introduced:
 - SmartPlant Instrumentation Explorer
 - Domain Explorer
 - Reference Explorer
 - Symbol Editor Utility for ESL
 - Yokogawa CENTUM Interface
 - Additional Naming Conventions
 - Disabling the Use of SmartLoop ☹️



SmartPlant®
Instrumentation
Powered by INtools®

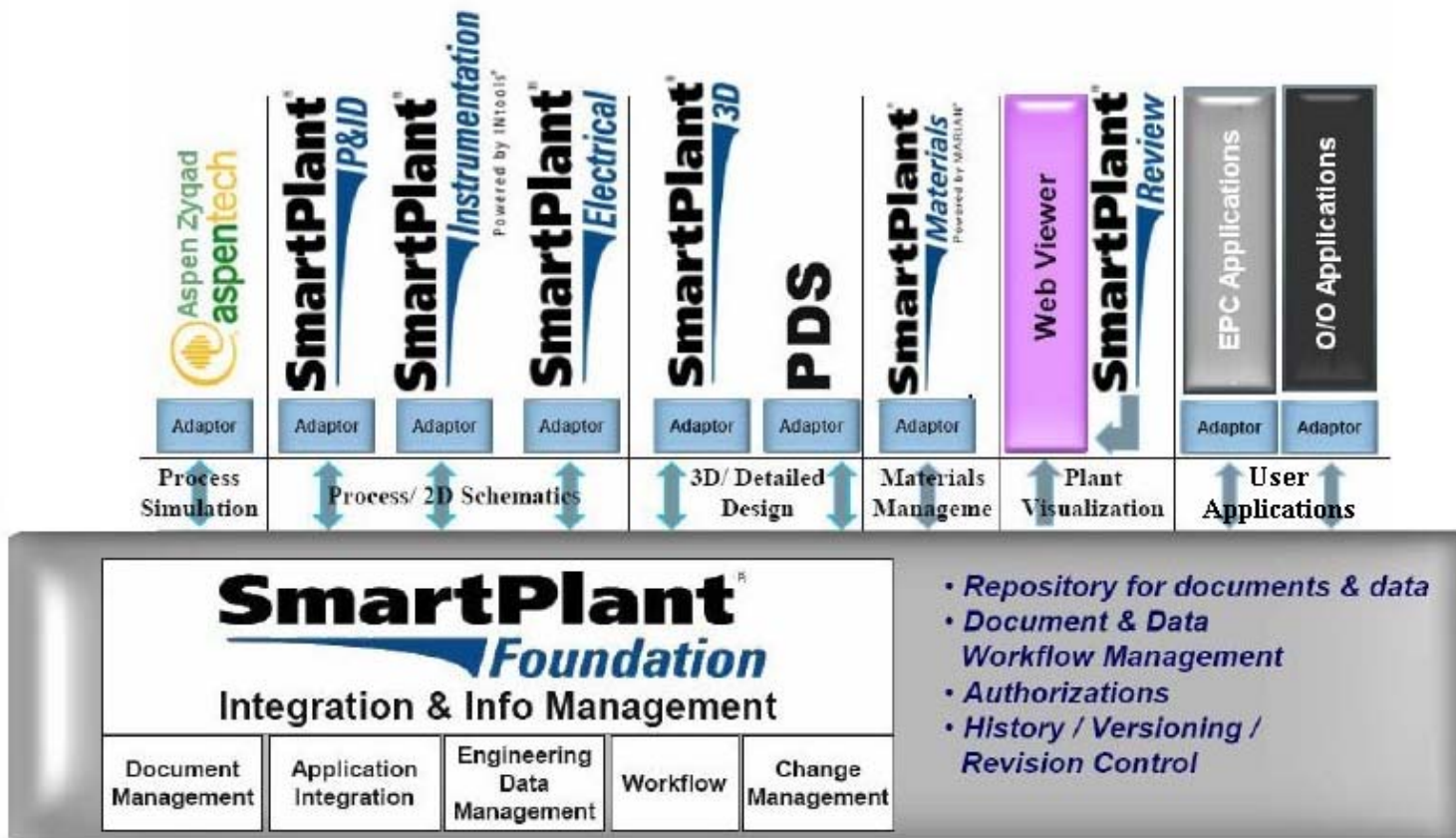
- SPI Version 2007 Introduced:
 - Rule Manager Utility
 - Naming Convention for CS Tags
 - Cable Block Diagrams
 - Flexible Naming Convention for all Naming Standards
 - Yokogawa User Interface
 - Virtual Tags in the Domain View
 - SPI Version 7 and 2007 are to carry the user community to 2009



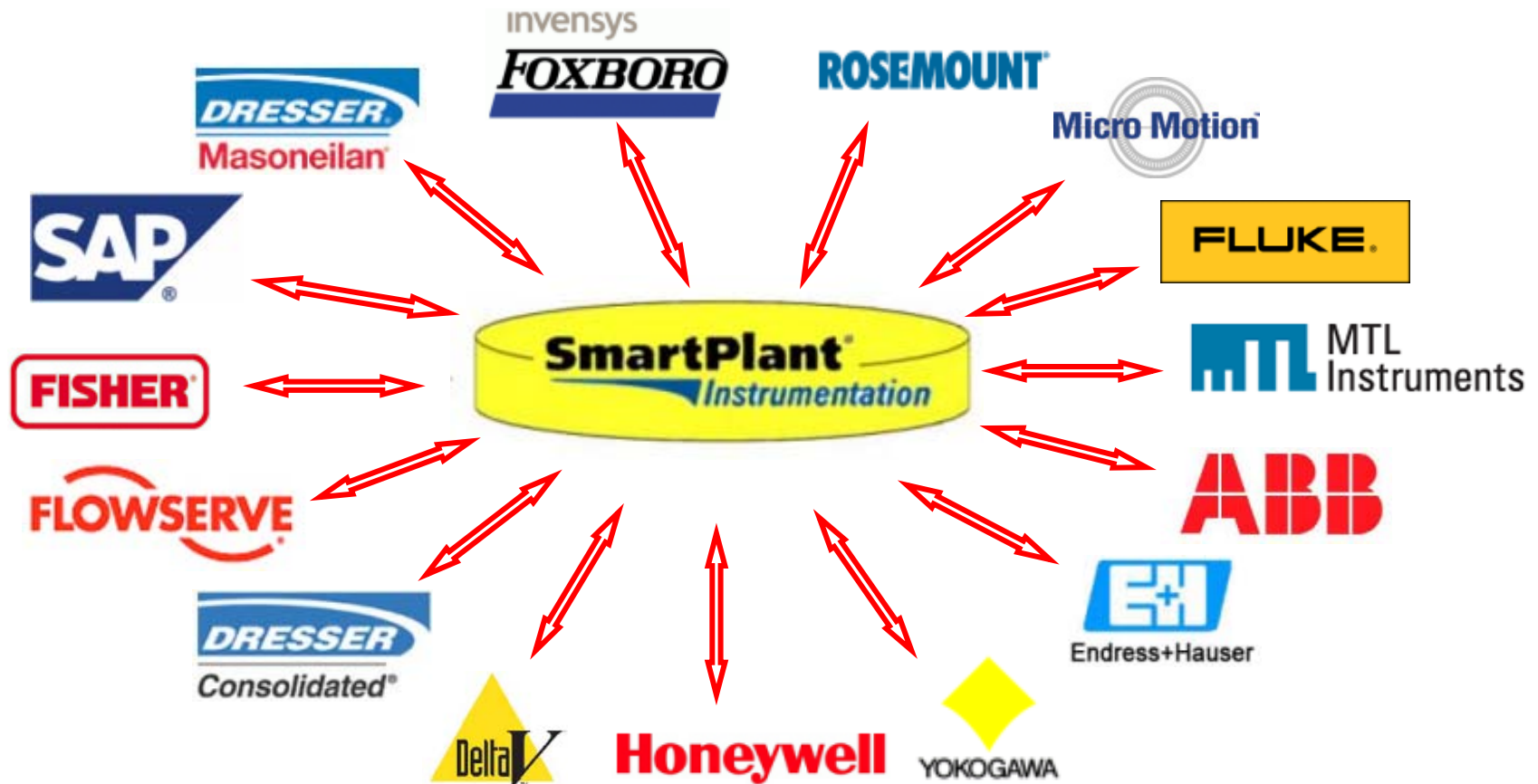
- SPI Version 2009 Introduced:
 - New Windows User Interface (icons, dialog boxes, and so forth)
 - Better Upgrade Utility
 - Removal of Network Installation
 - Improved deletion of Loops or Tags
 - Template batch creation of Loops
 - Cable export to SPEL
 - MTL SPI symbol library for Foundation fieldbus



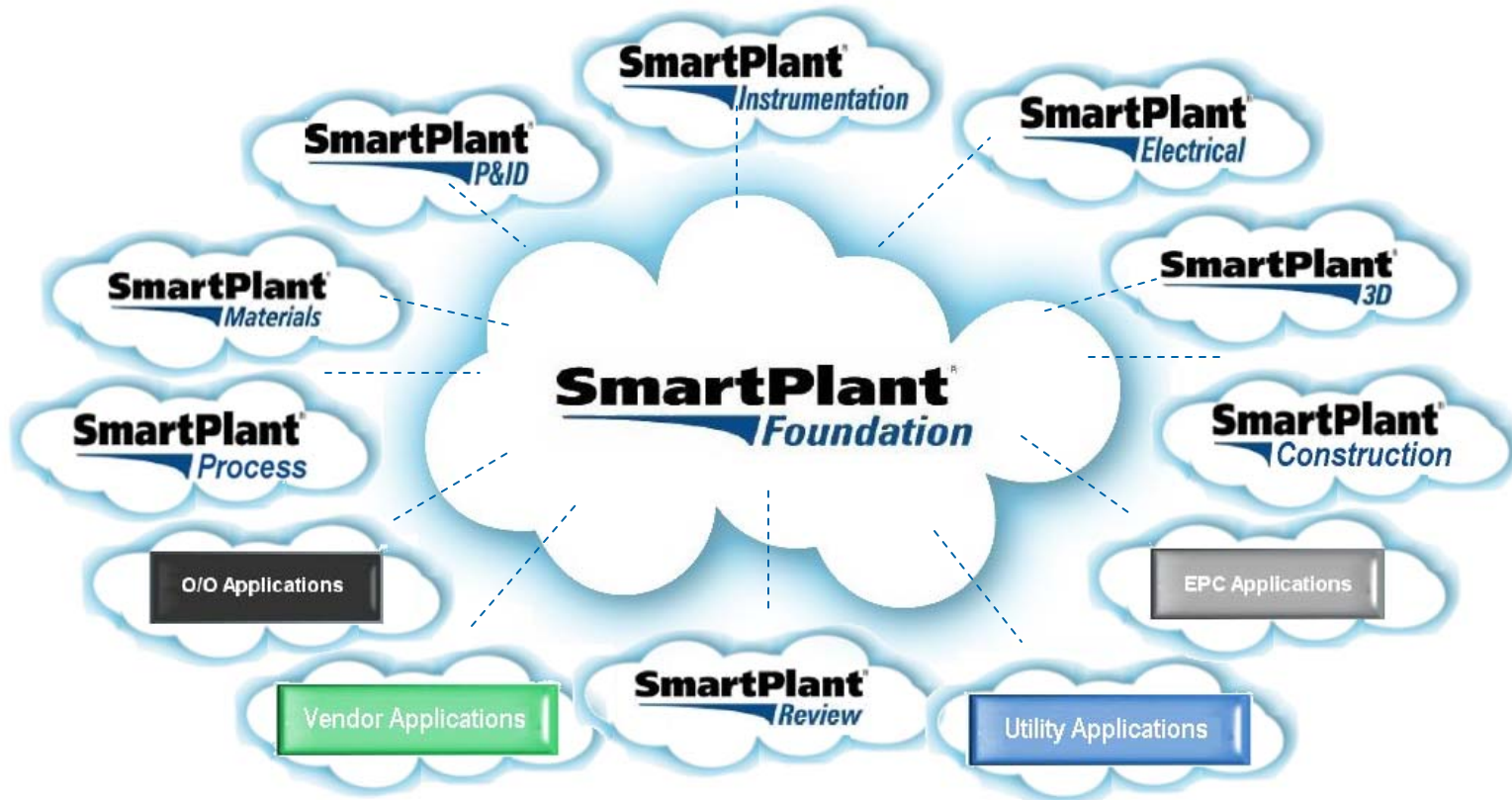
- SmartPlant Foundation TEF adaptors to interface ECP or Owner Operator software applications into the share base will develop another layer of integration for SmartPlant Instrumentation



- SmartPlant Instrumentation have more vendor and manufacture interfaces that any other Control System Automation software



- With the advent of Cloud Computing, Mobile Access, Web Security, Refined Standards and new SmartPlant Applications the Future Vision of Engineering and Supply Chain automation data integration with SmartPlant Instrumentation looks very promising



SmartPlant Instrumentation Continues to Evolve

