



# HEXAGON 2011

Building A Smarter World



# **INTERGRAPH @ HEXAGON 2011**

## **Engineering & Schematic Technical User Forums**

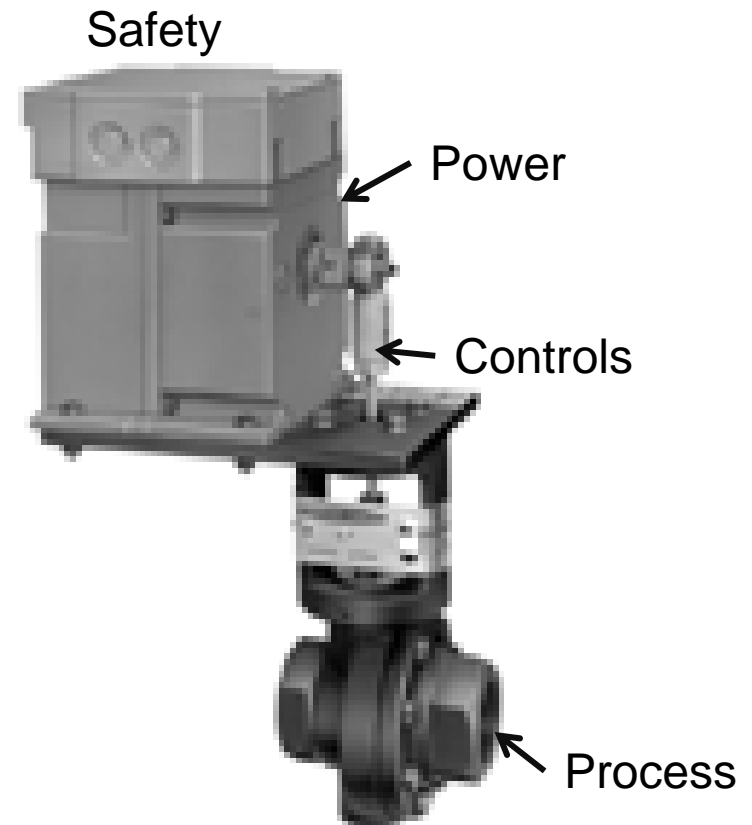
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Sunday June 5, 2011 Orlando

# Solving Business Problems

# Putting the Solution in Perspective

- Designing the Process
  - **SP P&ID**
- Safety and Risk Mitigation
  - **SP Process Safety**
- Controlling the Process
  - **SP Instrumentation**
- Powering the Process
  - **SP Electrical**
- Value add Engineering
  - **SmartSketch**
  - **SP Explorer**
- Validating the Design
  - **ETAP**
  - **E+H**
  - **More..**



**Motor Operated Control valve**

# Value Proposition

## Value Proposition – Reduce risk of design changes due to safety standards

### Points of Parity

- 1 Create layout with process/electrical/instr
- 2 Assign area classification
- 3 Reporting on equipment

### Points of Difference

- 1 Manage change
- 2 automate placement and connection
- 3 validate against P&ID

### Resonating Benefits

- 1 Rules to identify conflicts during design
- 2 Maintain relationships between process area, equipment and classifications during design modifications

## Base Project/Scope

500 P&IDs	700 electrical loads/panels/switches
2000 Equipment item	50 GA's
15000 instruments	

## Users

Design Engineering	labor cost \$60/h	Checker	labor cost \$80/h
	labor cost \$100/h		

**ROI** key drivers: optimize equip cost \$2000k/reduce checking 2 cycle \$128k/avoid 3 late design changes \$181k = \$2309k

### Costs:

Solution cost	\$ 600 k (maint \$ 120k)
Implementation cost	\$ 60k

### Quantitative/Tangible Benefits:

Savings in first year	\$ 1529 k
Savings in following years/projects	\$ 2189 k

### Qualitative/Intangible Benefits:

- 1 no late changes
- 2 better communication between the disciplines, elec/process/instr
3. Schedule impact

### Solution composition:

10 S3D/4 SP P&ID  
15 SPI/10 SPEL B-D

# Lower Cost of Ownership Task Oriented Solutions

# Knowledge Based Engineering

# Integration

# Industry Support

# Innovation

# Standards

# Customer Involvement

# Next Success

Thank you

*Have a Great Meeting and  
Conference*

**Thank You!**

