

# Previs Inc.

## Bailey DCS Simulator

For ABB Net 90, Infi 90, Harmony DCS systems

Used for  
Operator Training Simulator  
HMI Test  
Logic Test

# Bailey DCS Simulator

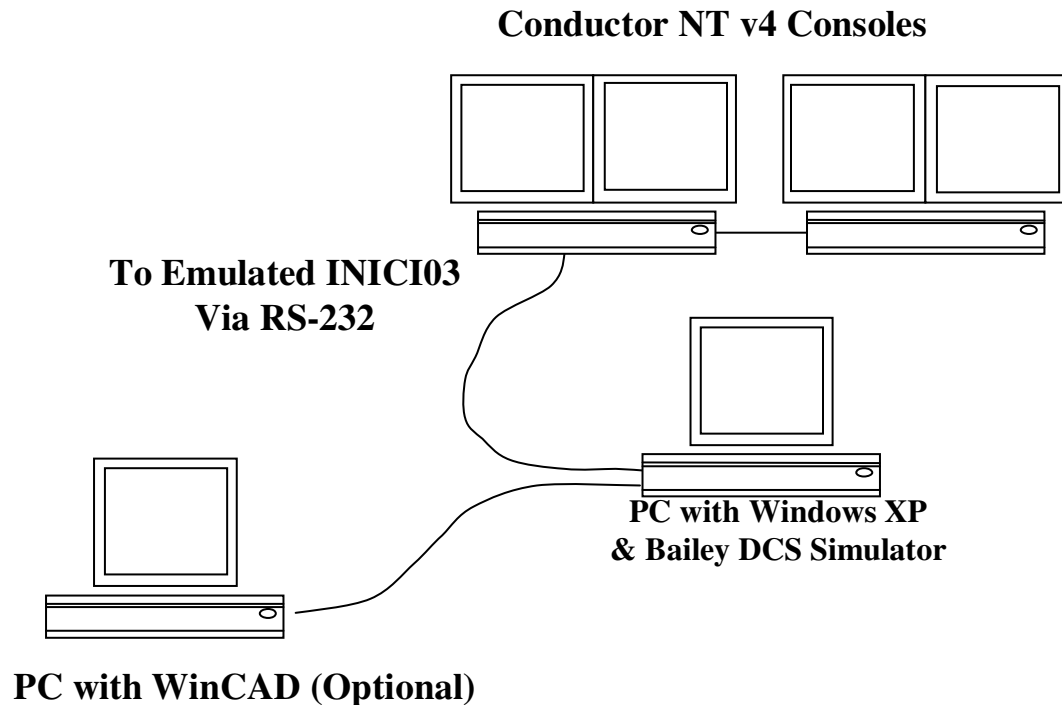
- ❑ Virtual Bailey DCS Execution Environment
  - Execute ABB binary DCS control logic files (CFG) as-is
    - No change to native ABB CFG files
    - Multiple, simultaneous, real time
  - Turn PC COM port into emulated ABB CIU
    - Connect multiple real ABB (and other) devices as-is
    - Support SCSI CIU emulation also (emulate ABB INICT03-SCIL)
- ❑ Field IO
  - Via API from Process Simulation
- ❑ OTS Features
  - Start, stop, Save/Restore state, backtrack/replay
  - 0.1 X to 10 X simulation speed

# Selected Operator Training Simulator Installs

- ❑ Avon Lake Power Plant (Ohio)
- ❑ Ashtabula Power Plant (Ohio)
- ❑ KEV Malaysia Power Plant
  - Our largest install
- ❑ APS Cholla Power Plant (Arizona)
- ❑ VC Sumner Nuclear Power Plant (SC)
  - balance of plant (feed water)
- ❑ Akzo Nobel (Texas)
  - With emulated Batch 90 support
- ❑ Dominion Cove Point LNG Plant (Maryland)
  - GSE process Simulation ([www.gses.com](http://www.gses.com))
  - DeltaV Console via DeltaV connect
  - ABB Composer Engineering Workstation
- ❑ Packaging Corporation of America
  - Honeywell Unisim™ Operations Process Simulation
  - DeltaV Console via DeltaV connect
- ❑ Midwest Generation (Illinois)
  - First of 4 systems in progress now

# Case Study – Avon Lake GS Training Simulator

## □ Operator Training Simulator



# Case Study – KEV Facility in Malaysia

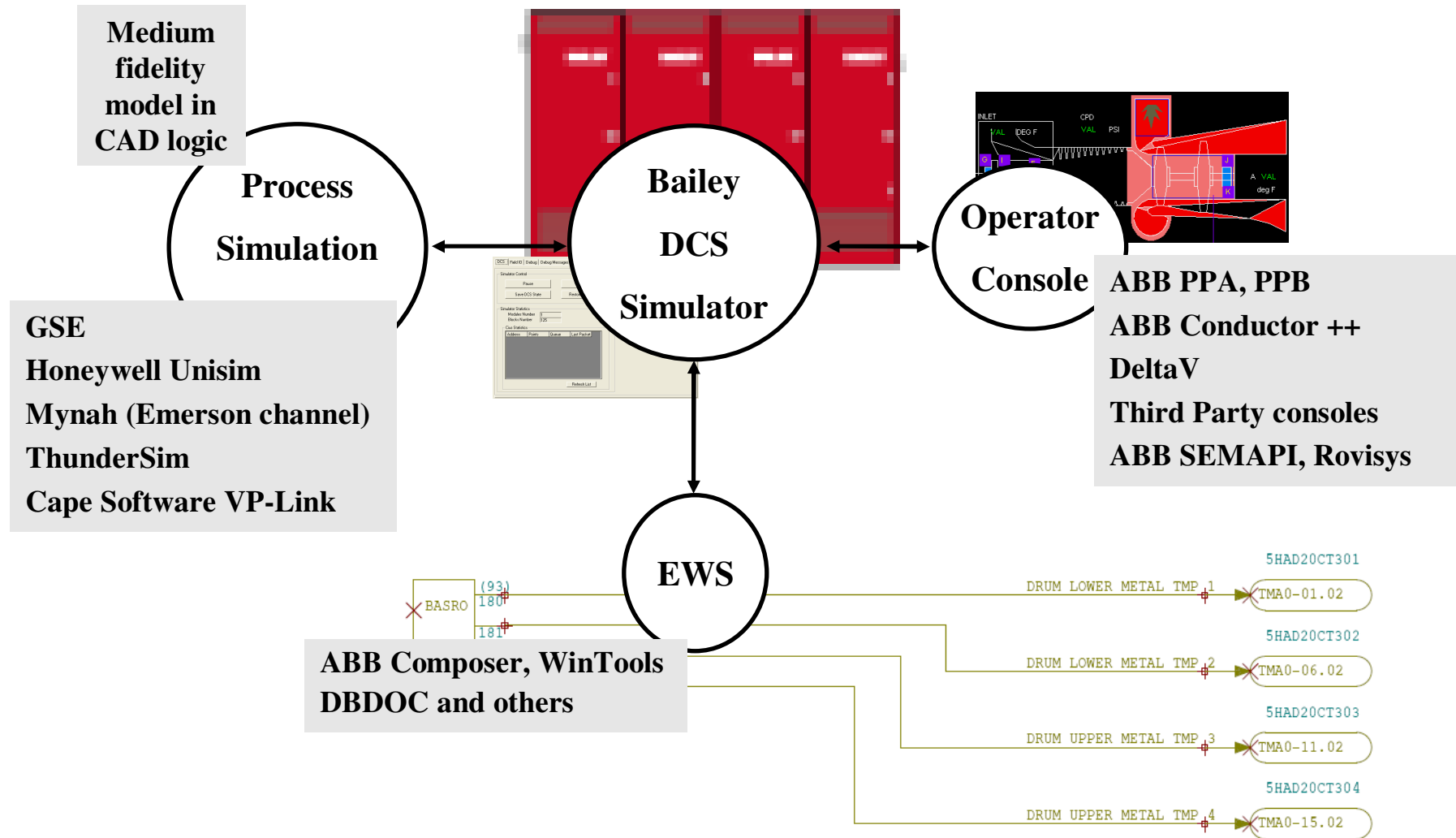
## □ Operator Training Simulator

- 95 controllers, 170,000 blocks, 10,000 IO
- 28,800 console tags to two OIS43 Masters and 6 Slaves
- High fidelity process simulation
- Start/stop, save/restore, backtrack, replay



Kapar Energy Ventures – Sultan Sulahaddin  
Abdul Aziz Power Station, Unit 5

# Configuration Choices For Training Simulator



## Other Applications

### □ HMI Test

- SAT and FAT test support
- Force values and alarms from DCS
- HMI structured validation test support
  - E.g. NASA test for PPA console migration
- Stress Test

### □ ABB Logic Test Before Install/Deploy

- Air Products *“It's really a GREAT product.”*

# Question & Answer