End User Concern And Challenges Of Control & Instrumentation

Issue:-Obsolescence

Expectation

End User Concern And Challenges Of Control & Instrumentation

Issue:-Skill development and domain expertise:-

Expectations

End User Concern And Challenges Of Control & Instrumentation

ISA Delhi Section

Issue:-Standardization & Interoperability of the systems

Expectations

End User Concern And Challenges Of Control & Instrumentation

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Skill development and domain expertise:-

Expectations

Conclusion

- The technology should facilitate rather than complicate.
- The C&I system implementer should select the technology that adds value to the over all process.
- The closer interaction is needed between C&I system suppliers and OEM's of Boiler and Turbine so that control system can be utilized to its fullest potentials
- The onus is on the suppliers, users, consultant and academician to address the problems typically faced by the control and instrumentation implementer 's in power domain.
- Control and Instrumentation will permeate hither-to un-touched arenas of power generation domain.
- The forum's such as ISA,IEEE should take the lead and make synergy in the automation system delivery.

एनटीपीसी
NTPC

ISA
ISA Delhi Section

THANK YOU.....

INNOVATIVE PRACTICES IN CONTROL AND AUTOMATION

- BY B. R. MEHTA

Thirty years ago, what were we thinking?

- It was 1980 ……
- Vinyl records
- Cricketers got paid for the first time.
- MySpace was my own, not shared with 100 million teenagers.
- No one knew what Microsoft was.
- Chat rooms included:
  - Dinner table
  - Verandah
  - Canteen

What Problems we had 30 years ago?

- Communication between plants and the home office.
- High inventories, no real time insight into the marketplace.
- Automation was limited, data from plant floor was hard to come by
- Energy costs.
- Discrete and process manufacturing operated on separate systems.

How did we solve these problems?

- More data.
- New technologies.
- New approaches to plant operations.
- A new breed of plant operators.

What problems do we have now?

- Less people
- Same or fewer assets
- Increased demand for:
  - more production
  - less waste
  - more efficiency
  - improved tracking
  - quality
- Standards
- Mix of equipment within a plant for process and discrete
- Energy costs
- Insight into front office and plant floor goals

Automation Control Challenges

- Reduce development and commissioning cost
  - Development, Engineering, Commissioning

- Multi-disciplined control systems
  - Discrete, Motion, Process, Drives, Safety applications

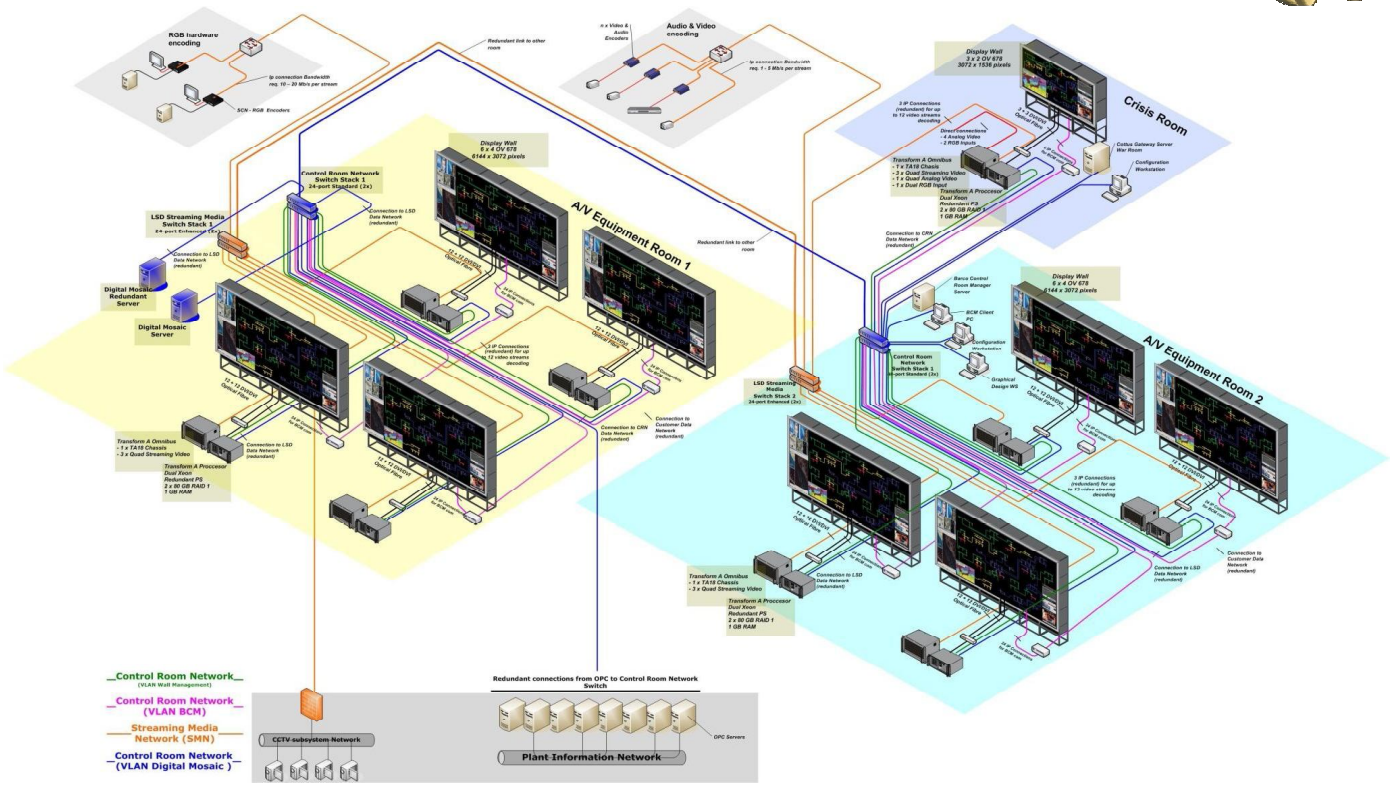
- Improve machine performance
  - Increase uptime by reducing downtime

- Plant floor-to-enterprise connectivity
  - Integration with end user's information systems
  - Remote diagnostics, web access, e-mail

Collaborative Operations:

Visual Communication
Video Walls

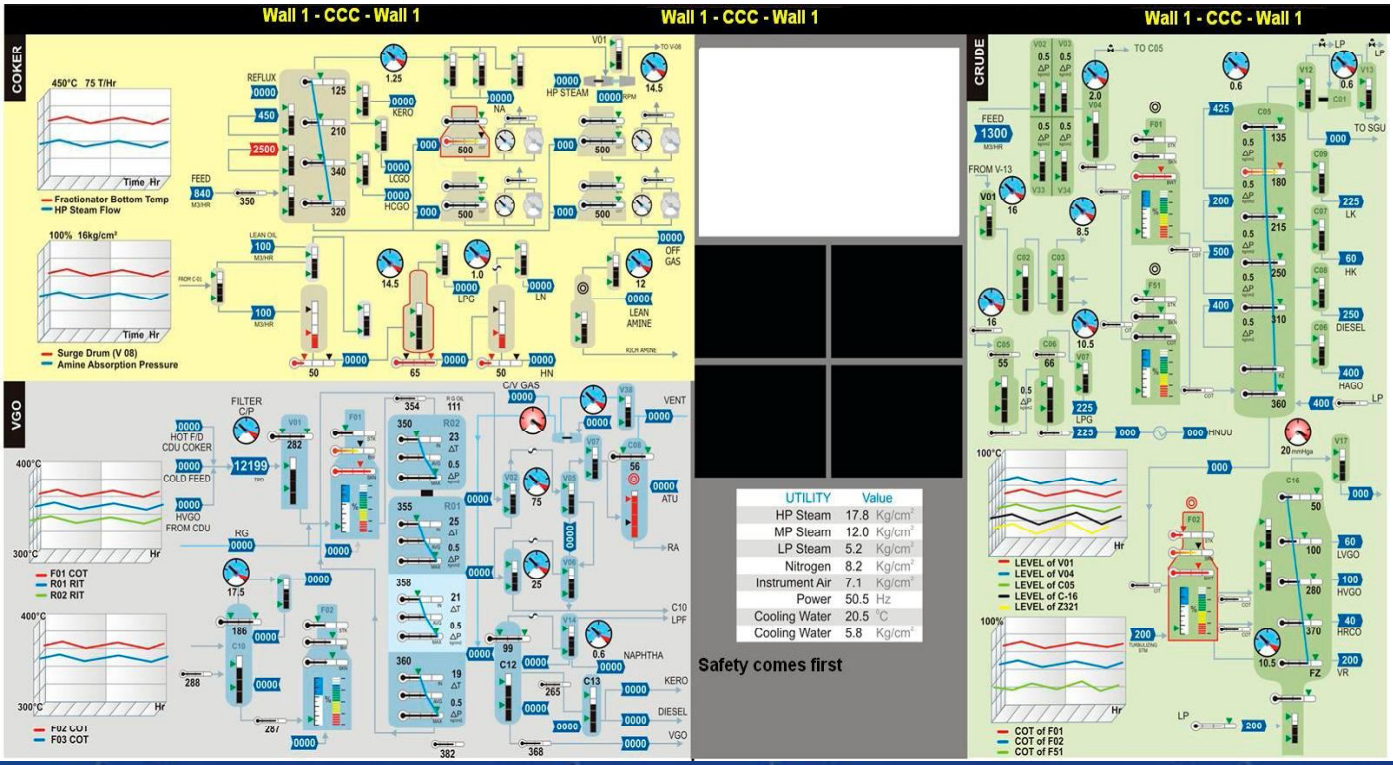
Large Screen Display Unit :



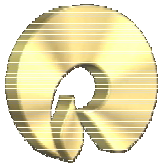
Operational excellence:

- Situation Awareness.
- Enable quick handling Plant upsets.
- Motivate Operations for Best Performance.

Typical start up layout:



Situation awareness:



- Critical information of upstream/downstream Units at glance
- Dependency related information within a cluster and with the outside world.
- Broadcast of latest status/abnormal events
- Quality/E-Log book information
- Constraints associated with feed and product

Typical Steady state Layout :