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NERC Critical Infrastructure Protection

“Critical Cyber Assets”


DESIGN • BUILD • SECURE



SHIELD OF SERVICES




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Four Security Disciplines

- **Cyber**
 - NERC Readiness
 - Secured SCADA/EMS/DCS Design
- **Physical**
 - Asset Protection Standards
 - Construction Management
- **Structural**
 - Blast Analysis
 - Structural Hardening
- **Operational**
 - Grid Reliability Analysis
 - Emergency Operations Procedures



SHIELD OF SERVICES

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Critical Infrastructure Protection Clients

- Ameren
- Tri-State G&T
- Department of Defense
- Orlando Utilities Commission
- JEA
- MidAmerican Energy
- Kansas City Power & Light
- Hoosier Energy
- City Utilities
- Northeast Utilities
- PEPCO
- Southern Maryland Electric



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Where are your Critical Cyber Assets?

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The new face of Critical Cyber Assets

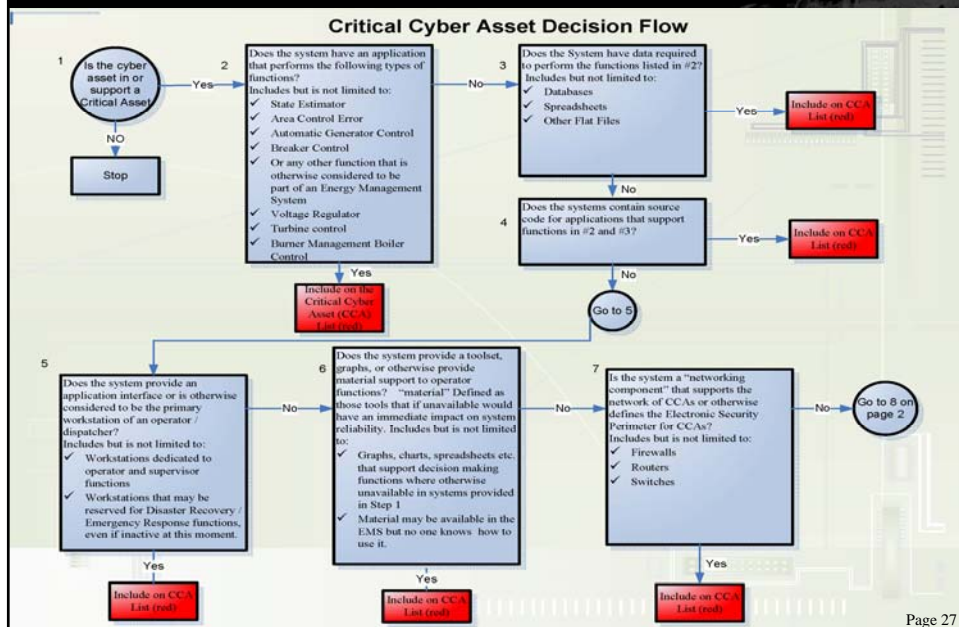
- RTUs, Relays & Communication Processors



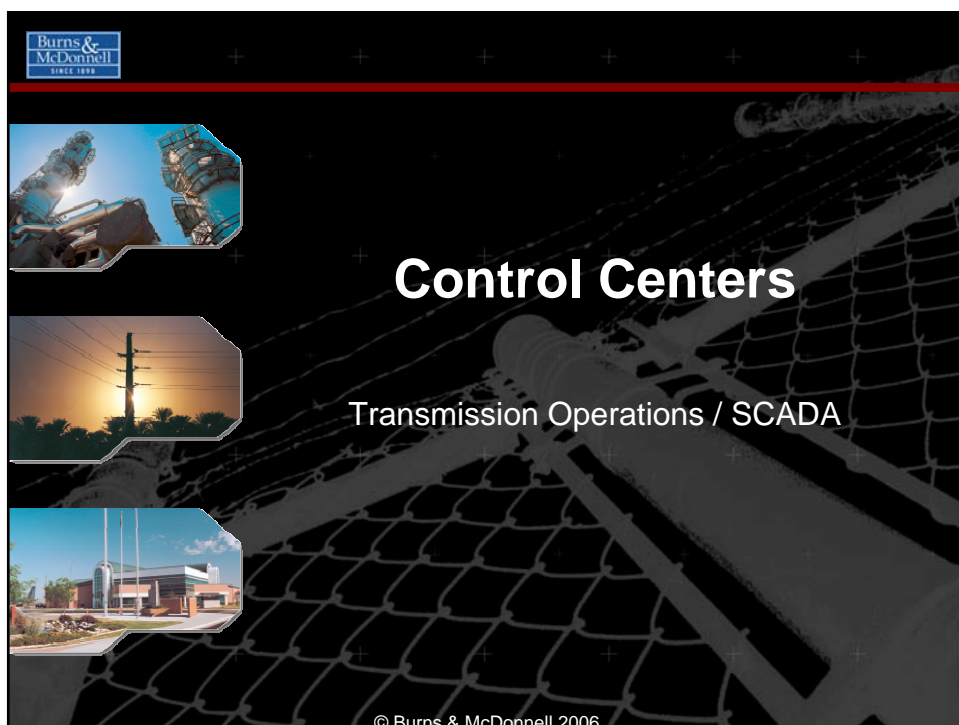
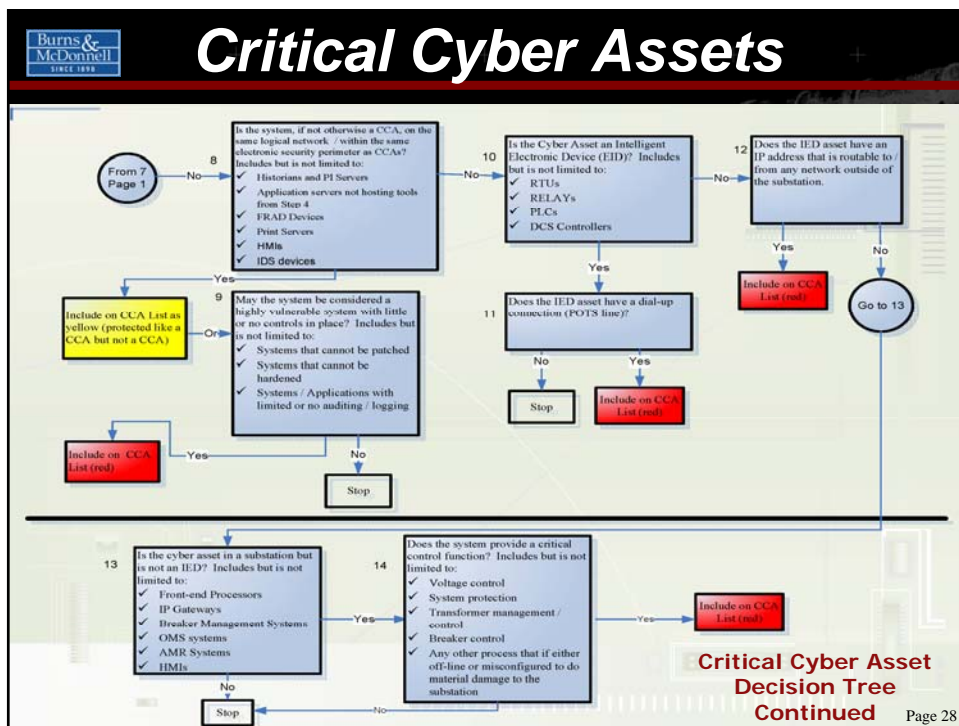
- Controllers, PLCs, and HMIs
 - Emerson's Migration path from WDPF includes upgrading controllers with embedded VxWorks.
 - Controllers are IP enabled

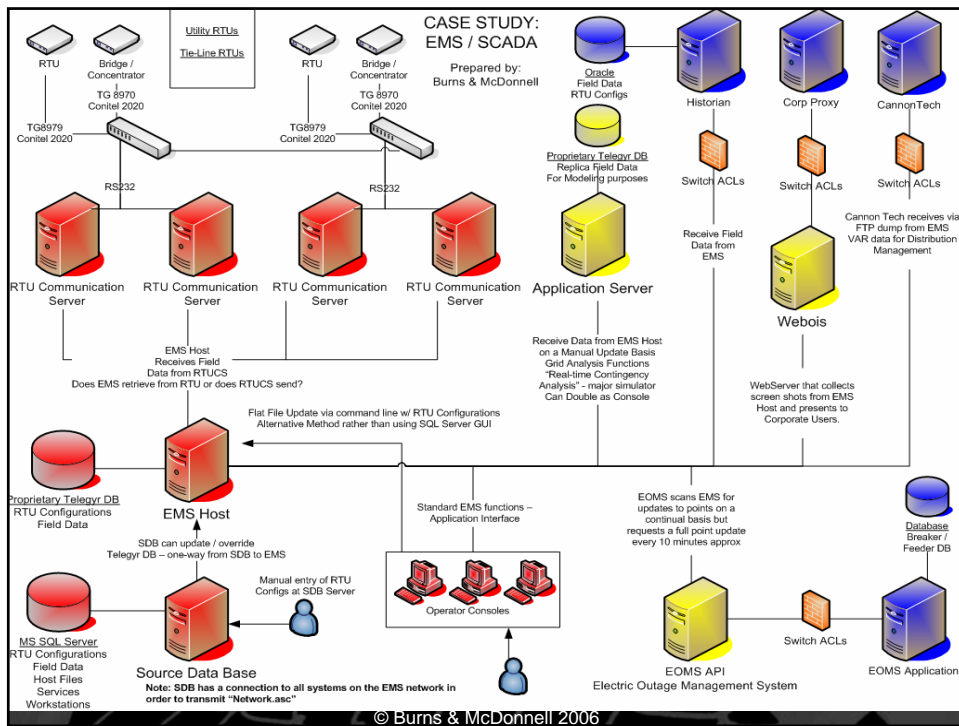
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Critical Cyber Assets



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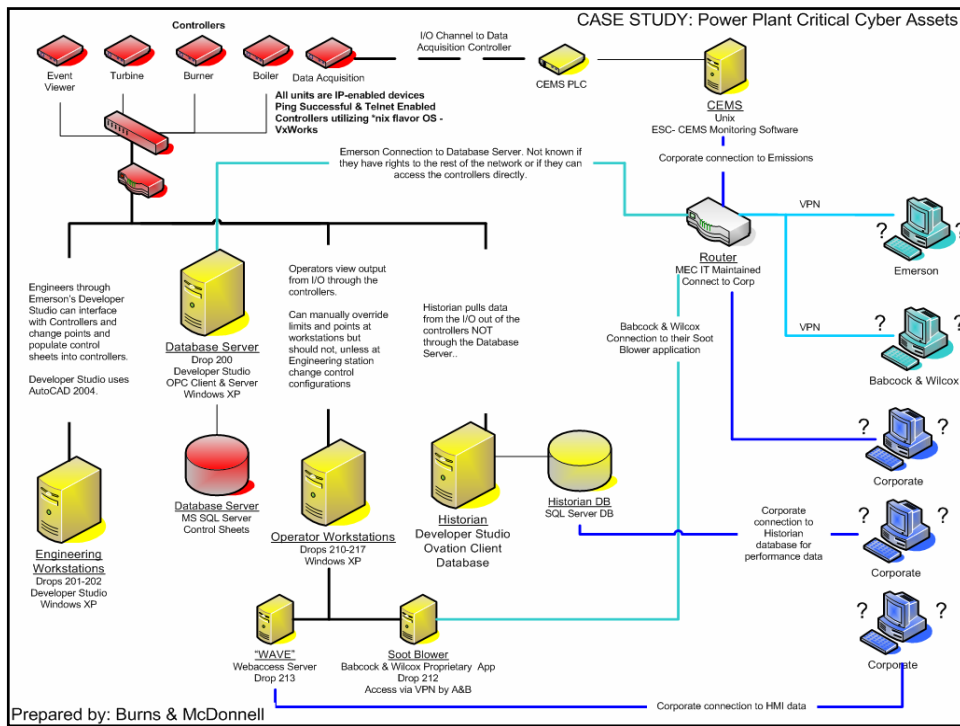
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Dual Homed Systems, IP-enabled Controllers, and Vendors

...OH MY!

(Generation Critical Cyber Assets)

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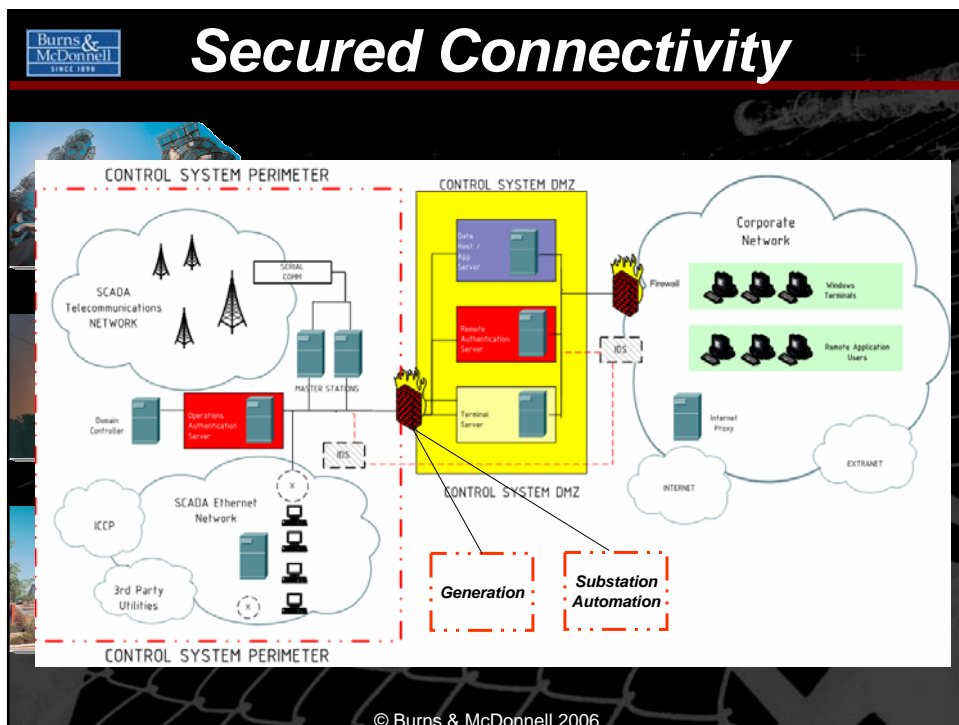
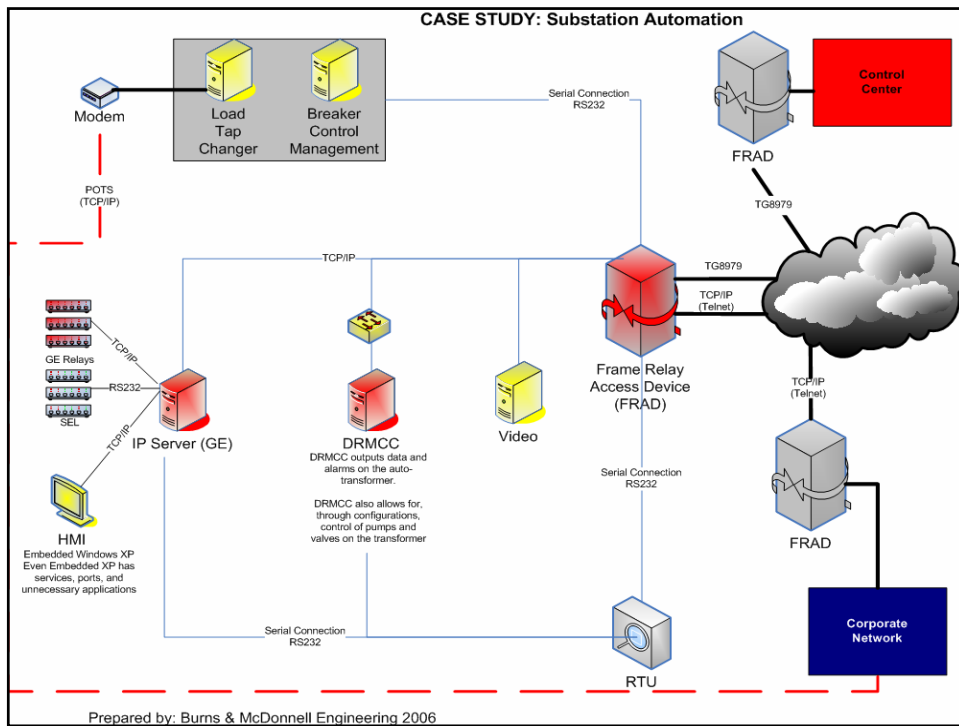


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And now for something completely different.....

(Substation Critical Cyber Assets)

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Thank You

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