



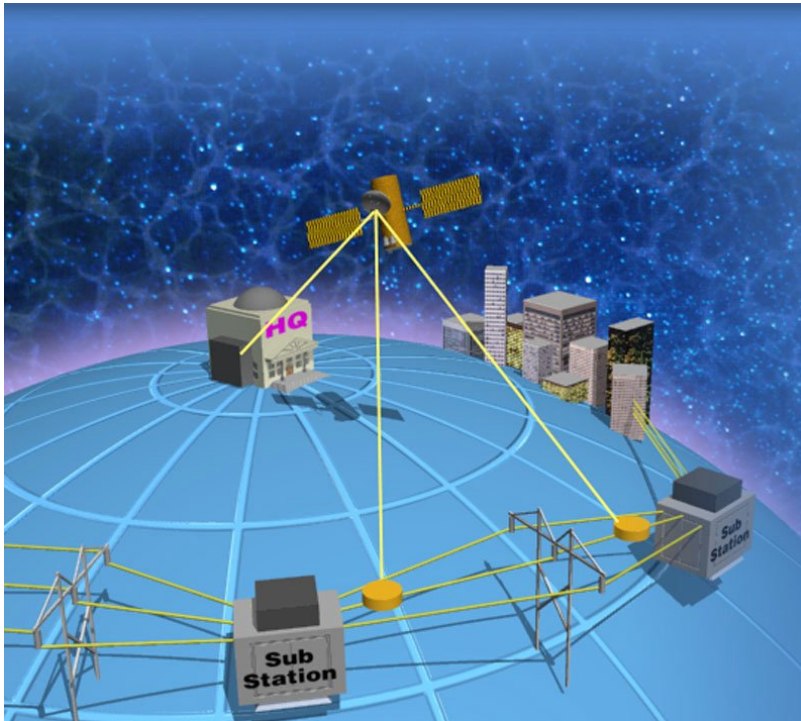
Smart Grid Primer - Introduction

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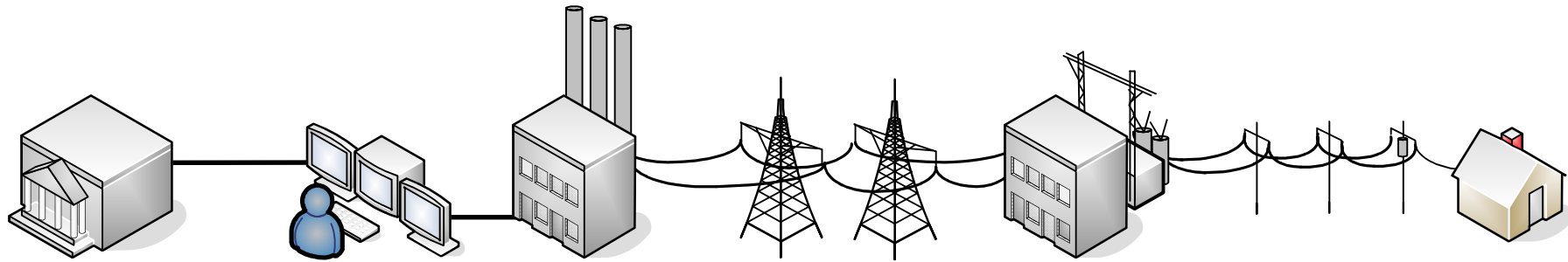
- Session 1 – Grid Infrastructure for Beginners
 - Erich W. Gunther – Track Lead - Introduction to the Smart Primer Track
 - Aaron Snyder – Moderator - Overview of the Infrastructure
 - Robert Burke – Energy Markets and the Role of the RTO/ISO
 - Charlie Smith – Smart Appliances and the Premise Network
- Session 2 – Smart Grid Applications
 - Doug Houseman – Moderator - Lessons Learned
 - Gary Rackliffe – Transmission Systems and Substations
 - Heather Sanders – Smart Grid Roadmaps
- Session 3 – Tools for Regulators
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 - Chris Villarreal – the California Perspective
 - Ken Wacks – GWAC tools
 - Jeremy Laundergan – A utility perspective

Makes use of communications, computing and power electronics to create a system that is:



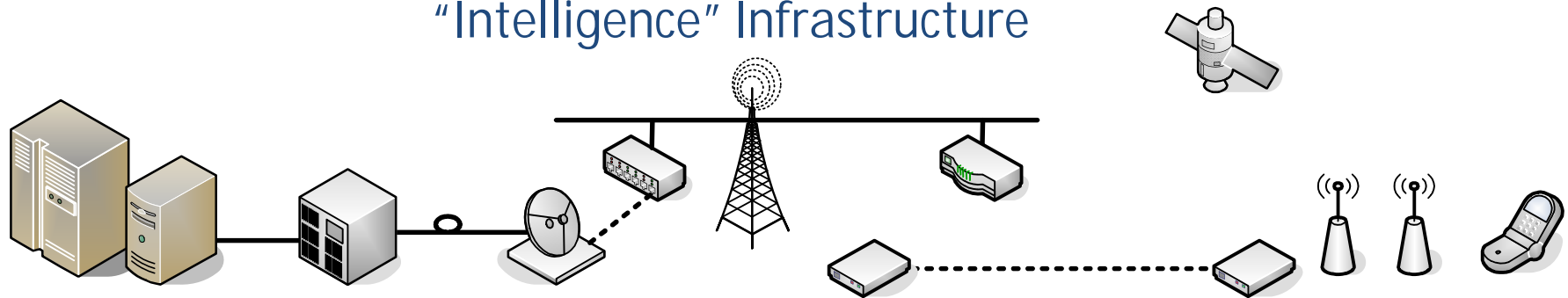
- **Self-Healing** and **Adaptive**
- **Interactive** with consumers and markets
- **Optimized** to make best use of resources and equipment
- **Predictive** rather than reactive, to prevent emergencies
- **Distributed** across geographical and organizational boundaries
- **Integrated**, merging monitoring, control, protection, maintenance, EMS, DMS, marketing, and IT
- **More Secure** from attack

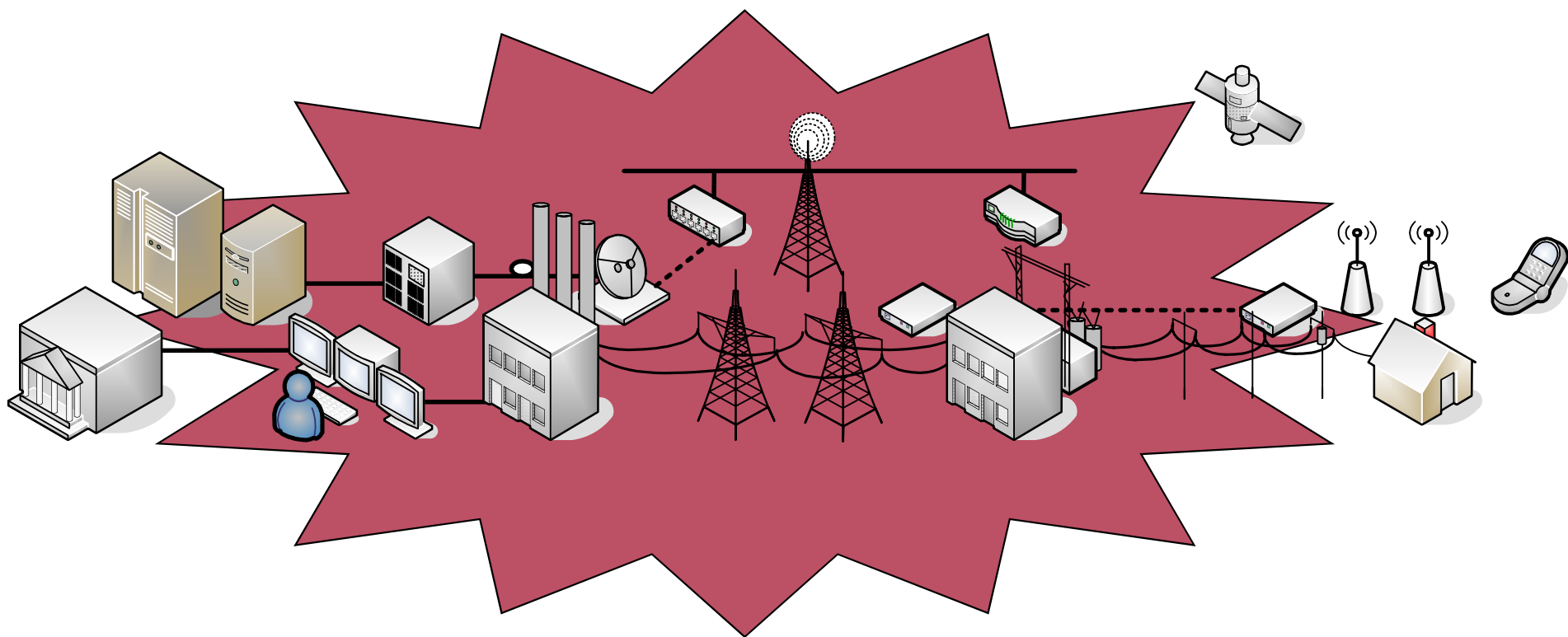
Merging Two Infrastructures

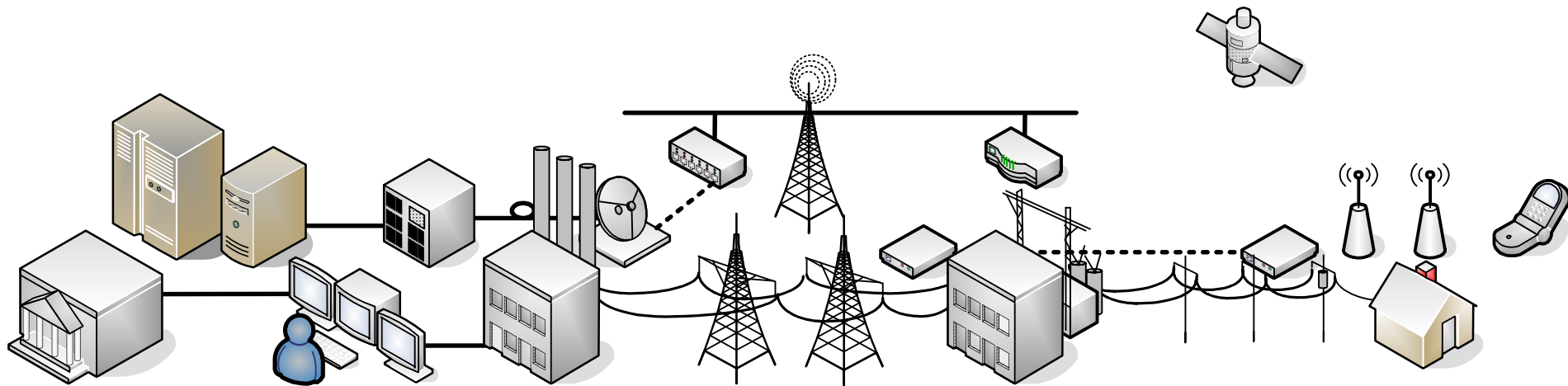


Electrical Infrastructure

"Intelligence" Infrastructure







Real-time Simulation and Contingency Analysis

Distributed Generation and Alternate Energy Sources

Self-Healing Wide-Area Protection and Islanding

Asset Management and On-Line Equipment Monitoring

Demand Response and Dynamic Pricing

Participation in Energy Markets

Shared Information – Continuously Optimizing – Intelligent Responses!

- “Without the knowledge of where we have been and the infrastructure we have now, it is not possible to have meaningful discussion of where we need to go and how to get there.”
- Further questions and comments:
 - erich@enernex.com

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