

Totally Integrated Munitions Enterprise (TIME) Network

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Totally Integrated Munitions Enterprise (TIME)

- Develop the necessary manufacturing technology for the Industrial / Organic Base to manufacture Energetic Materials to support future requirements:
 - Flexible in product spectrum
 - Elastic in capacity
 - Economic in operation
- Strategy
 - Creation of a virtual IPT
 - DoD energetics may have to be produced at different locations or several locations concurrently in the event of surge requirements

Purpose

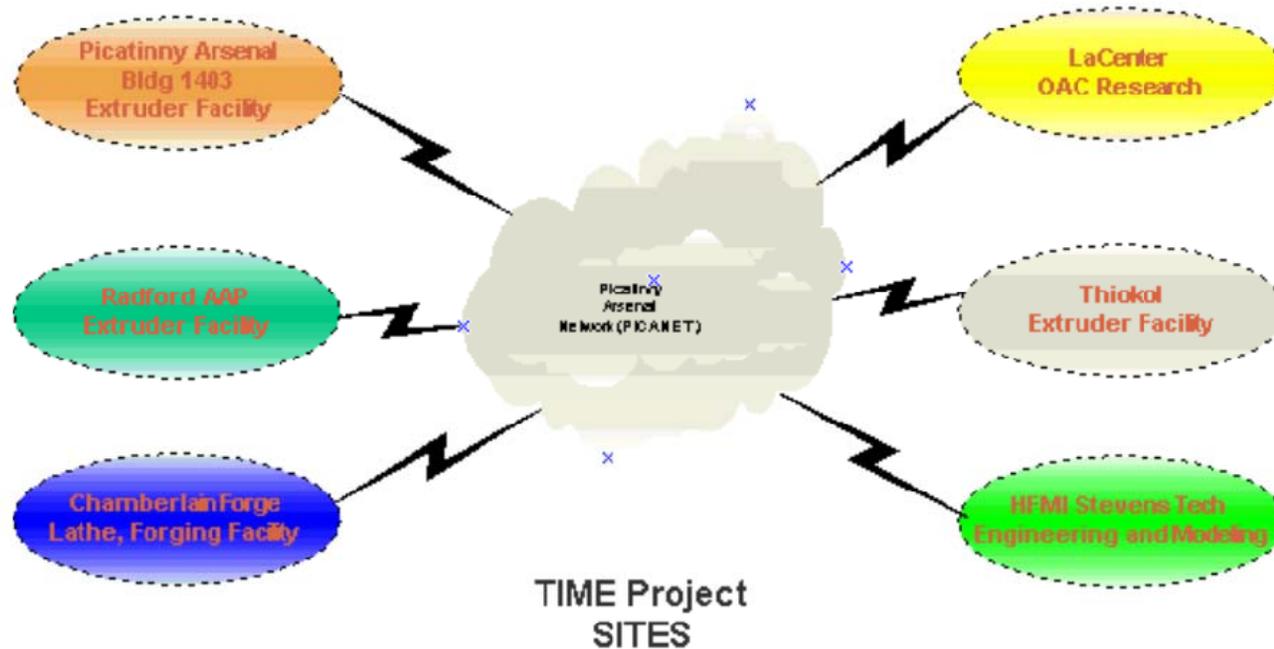
- Provide a real-time video/data interface between energetics processing and load/assemble/pack sites with TACOM-ARDEC's engineering resources:
 - ARDEC Pilot scale operations
 - Process development, increased understanding, computer modeling
 - Increased instrumentation
 - Troubleshooting
 - Industry & Academia
- Decrease process development time

Benefits of the Network

- Effects of an Integrated Product Team (IPT) without co-location of the team members
- Rapid/instant and accurate data transfer
- Identical products at numerous sites
- Ensures product quality
- Requires application of fundamental understanding of material behavior
- Flexible Capacity to Manufacture Energetic Materials

Architecture

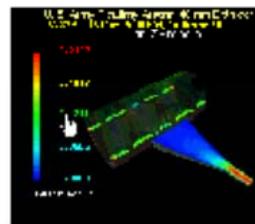
TIME Network Top Level Architecture



TIME Project Services



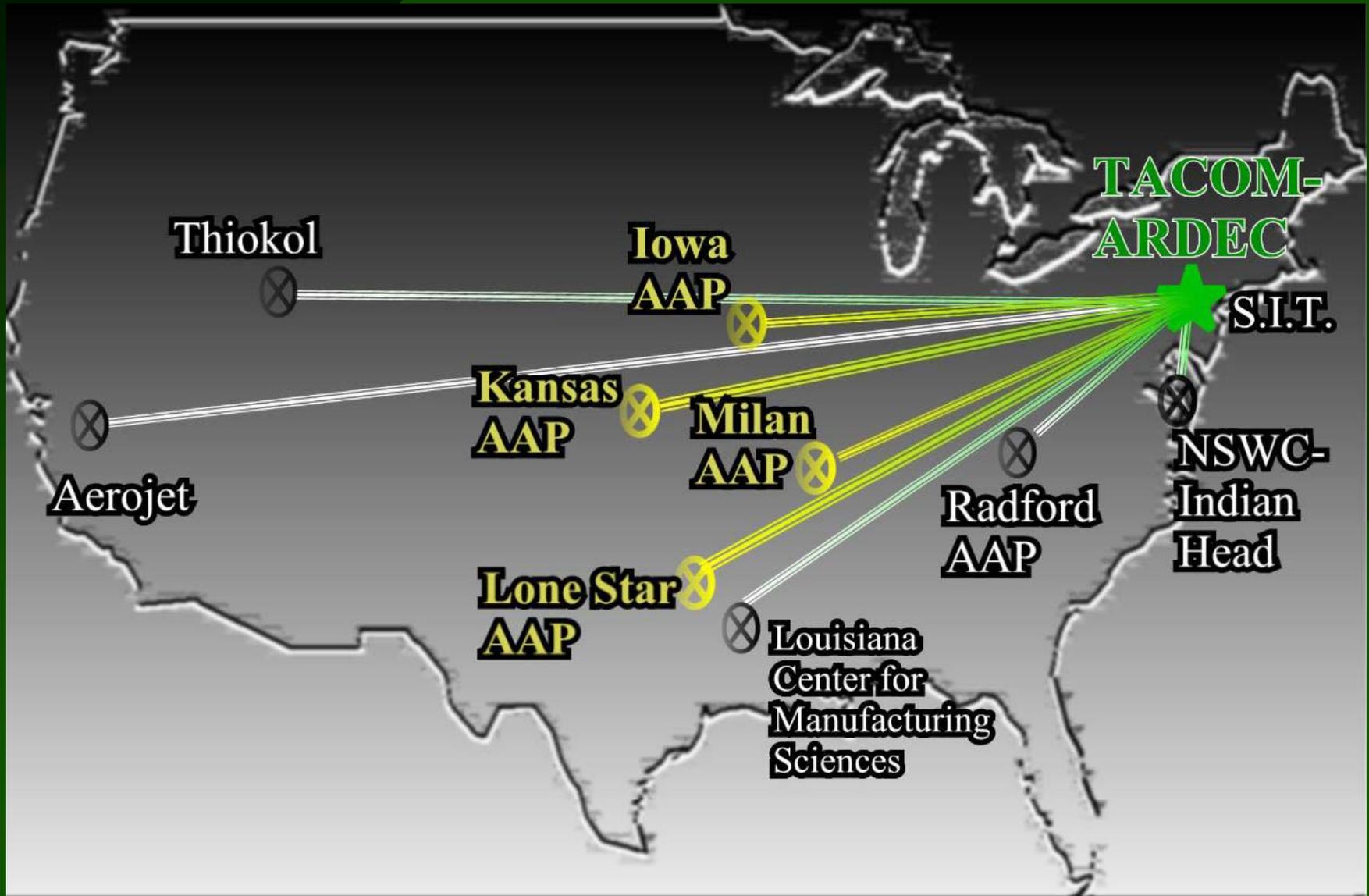
Energetics Modeling



Broadcast Video

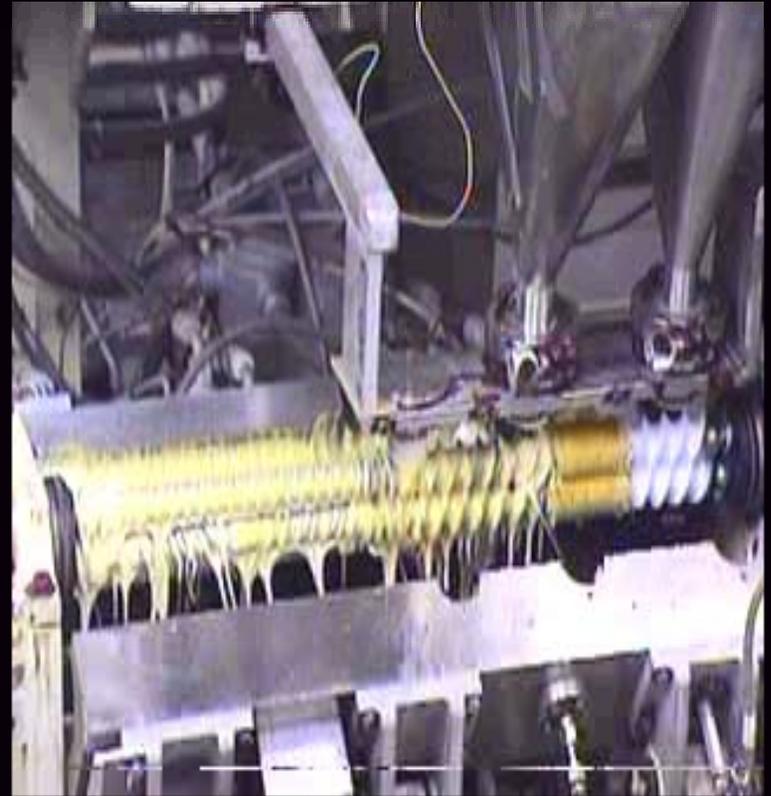


Current Network

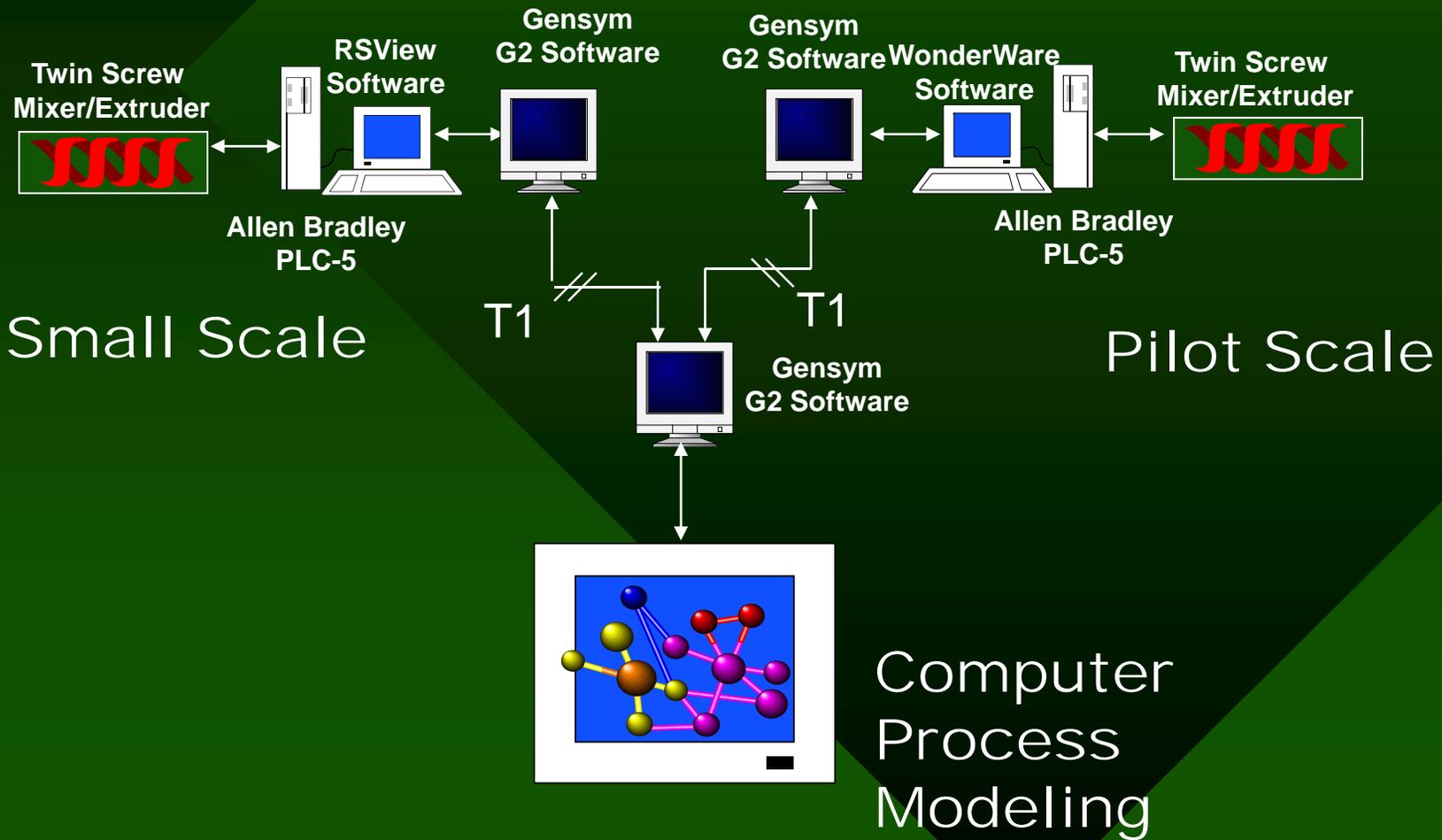


Network Description

- Closed circuit – dedicated T1 lines
- Allow for broadcasting of video and data directly from the material processing point
- Desktop video conferencing



Example of Current Wide Area Network



Network Management

- The TIME Network is controlled by ARDEC
 - circuit, router, routing, etc...
- The TIME Network is entirely separate from local networks
- Individual sites have Level 10 Access to Router
 - View only access
- IPTV Server/DVC maintained by ARDEC
- Routers on both sides will be using IPSEC
 - This is public encryption available in Cisco IOS.

Demonstration

- Tour of ARDEC TSE facility with TIME Demonstration
- Two groups of roughly 20 persons each
 - Volunteers to drive?
 - Follow my Gray Mitsubishi Galant towards “Mt. Hope Enclosure”
 - ARDEC personnel will staff the enclosure gate