CIV Quarterly Progress Meeting
Rome, October 1st, 1996

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Agenda

- Meeting Focus: Integration Framework
- Meeting Agenda:
  - Introduction
  - Status reports for the four application areas
    - Command&Control, Weather, ELM, Visible Human
  - Status reports for the component technologies
    - Integration framework
  - Interleaved technology demonstrations
- Deliberately omitted items:
  - not yet integrated technology components

Core Technology Development

- Significant technical progress in the following critical technology areas
    - VR and WWW integration (T1)
    - Compression (T2)
    - Collaboration Technologies (T3)
    - Geographical Information Systems (T4)
    - Parallel and Distributes Multimedia Databases (T5)
    - WWW Technologies: Digital Video, VRML, Java (T6)
  - Items marked orange will not be discussed today

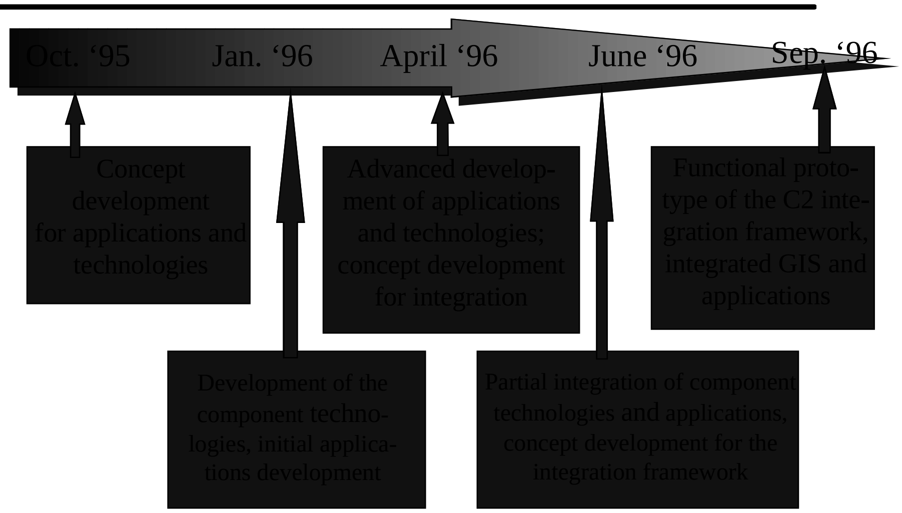
Technology Demonstrations

- C2 Integration Framework and applications
  - GIS, VTC, whiteboard, chat, weather visualization, messaging
- 3D Visible Human
- Terrain visualization/GIS
  - vawelet compression of terrain data
  - adaptive triangulation
- Videoteleconferencing system
  - integrated with web browser, new codecs (= improved video quality)

Application Development (A2)

- C2 Application
  - Two concurrent trusts
    - Vanguard Research working on the concept and implementation of the end-user GUI layout and functionality requirements
    - NPAC team working on the technical aspects of the C2 applications
    - the two approaches will converge as both prototypes are being delivered to the partners and critically analyzed
    - current status: functional demo of the integration framework, system specs delivered to Vanguard, convergence process for the two approaches is ongoing

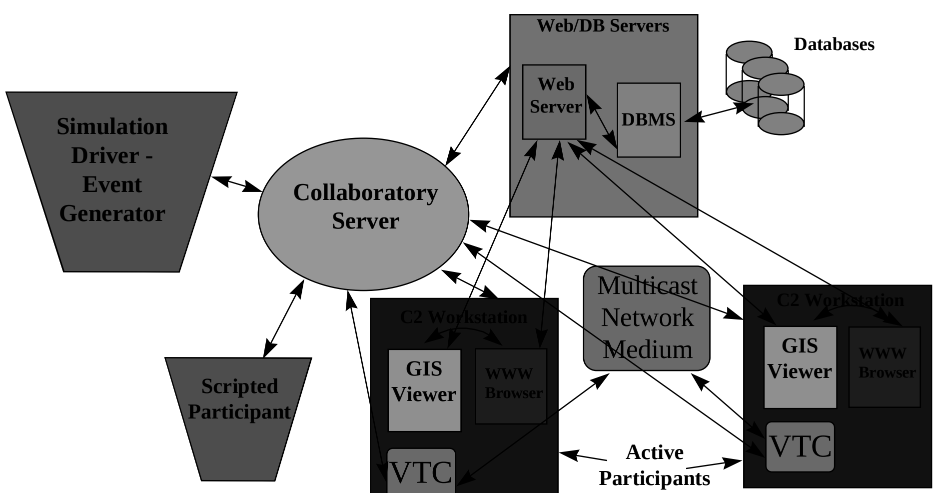
Technology Integration Status



Application Development (A2)

- C2 Application (cont.)
  - Integration Framework forms technological foundation of the C2 application
    - After initial extensive technology explorations, the system has been designed to utilize only sufficiently mature technology components (Java/Javascript, browser plug-in, OpenDVE for multimedia, LiveConnect)
    - The framework, tentatively code-named “Tango”, consists of multipart runtime and a set of APIs that assist the process of interfacing standalone apps to the collaborative framework
    - “Tango” offers similar functionalities as Habanero (NCSA) and Infosphere (Caltech), but goes beyond these systems offering integration framework for heterogeneous applications

Technology Integration Framework



Application Development (A2)

- C2 Application (cont.)
  - Control Application(s)
    - we envision that the entire system will offer three levels of user interfaces:
      - a configuration application, designed for system administrator, used to configure all system components and system security
      - a control application, designed for the CC center operator, used to control applications and sessions (functional prototype)
      - C2 application proper, designed for CC system user, used to provide “encapsulated” set of predefined functionalities (Vanguard)
    - this set of interfaces trades progressively trades flexibility for ease of use

Application Development (A3)

- Electromagnetic environments
  - Work has been focused on development of parallel code
  - Separate presentation
  - Release of data to unclassified environment will enable further integration work

Application Development (A1)

- Weather simulation
  - New approach: supplement Oklahoma code work by integrating into the system publicly available weather data
    - wealth of weather data is being made available on the net
    - in the spirit of the CIV project, we will provide tools to make these data available to the C2 application
    - an example tool has been ported and integrated with Tango
    - details of the new approach will be presented by Scott Klasky latter today

Application Development (A4)

- Telemedicine
    - The effort during the summer concentrated on the 3D Visible Human project
    - Detailed status report will be presented by Roman Markowski