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*This form is to be filled out (typed or hand-printed) by the person who announced the meeting (i.e., the person who issued the meeting notice). The completed form, and the attached copy of meeting handout materials, will be sent to the Document Control Desk on the same day of the meeting; under no circumstances will this be done later than the working day after the meeting.
Do not include proprietary materials.*

DATE OF MEETING

08/20/2002

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

Docket Number(s)	<u>Project 689</u>
Plant/Facility Name	<u>Westinghouse - NEI</u>
TAC Number(s) (if available)	<u></u>
Reference Meeting Notice	<u>ML022260412</u>
Purpose of Meeting (copy from meeting notice)	<u>To meet with Westinghouse to discuss their construction scheduling software.</u>
	<u></u>
	<u></u>

NAME OF PERSON WHO ISSUED MEETING NOTICE

Joseph Sebrosky

TITLE

Sr. Project Manager

OFFICE

NRR

DIVISION

ADIP

BRANCH

NRLPO

Distribution of this form and attachments:

Docket File/Central File
PUBLIC

DF03

MEETING TO DISCUSS CONSTRUCTION SCHEDULING SOFTWARE

James W. Winters
Manager, Passive Plant Projects
412-374-5290 - winterjw@westinghouse.com

Agenda

- 11:00 Introductions All
- 11:15 Meeting Purpose and Expectations NRC
- 11:30 AP1000 Primavera Standard Construction Schedule
 - **Genesis, Philosophy, Level of Detail, Form and Format** W – Winters
- 12:15 Break – Lunch All
- 12:45 Lunch, continued
- AP1000 Plant Design in 3D
 - **Genesis, Philosophy, Level of Detail, File Structure, Attendant Data Bases** W – Winters
- 1:15 AP1000 Virtual Tour W – Clelland
- 1:45 AP1000 Virtual Construction
 - **Genesis, Philosophy, Development, Demonstration** W – Winters, Clelland
- 2:45 Summary of Minutes and Action Items NRC
- 3:00 Adjourn All

AP1000 Primavera Standard Construction Schedule

- Prepared in Primavera
- Prepared by MK Ferguson, now Washington Group
- Prepared in parallel with AP600 design
- Includes activities from site selection through plant turn over
- Currently on Primavera P3, version 3.1
- One Standard Schedule with custom variants

AP1000 Primavera Standard Construction Schedule

- **Logic Based**
- **Durations established by constructors**
- **5 10 hour days per week**
- **Inspections and setup on back shifts**
- **Modular construction approach**
- **Nth plant - 5 year overall, 18-36-6**
- **5700+ activities**
- **About “Level 3”**

AP1000 Primavera Standard Construction Schedule

Current Subschedules

- **Licensing**
- **Procurement**
- **Engineering**
- **Yard and Site Preparation**
- **Nuclear Island - Areas**
- **Nuclear Island - Containment**
- **Nuclear Island - Auxiliary Building**
- **Annex Building**
- **Turbine Building**
- **Diesel Building**
- **Radwaste Building**
- **Test and Startup**

AP1000 Plant Design in 3D

- **InterGraph PDS**
- **InterGraph Smart Plant Review**
- **Entire AP600 (\$450M) in 3D**
- **AP1000 is the same (almost) as AP1000**
- **Entire AP1000 is in 3D**

AP1000 Virtual Construction

- **InterGraph Smart Plant Review**
- **Schedule Accessory**
- **PDS models are attached to selected activities from the Primavera schedule**

4D Virtual Construction

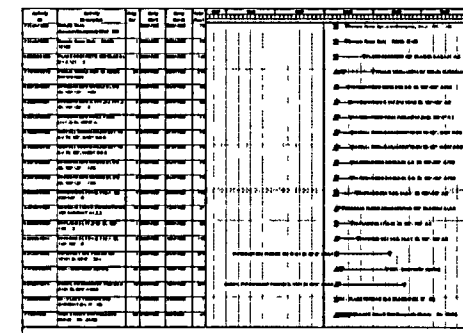
Uses AP600/AP1000 data:

- 3D detailed model of entire plant
- Construction schedule (>5700 activities)
- Construction plan
- Modularization plan
- Startup plan



4D Objectives:

- Shorten construction schedule
- Permit construction expert review
- Schedule confidence



Schedule & Model Integration

Intergraph Design Review product

Primavera Project Planner

Continuing interactions with software vendor

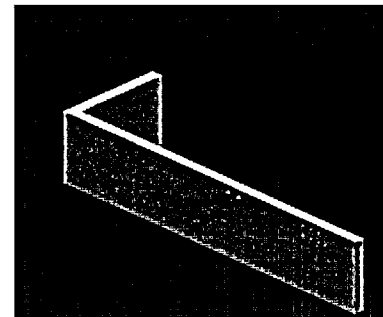
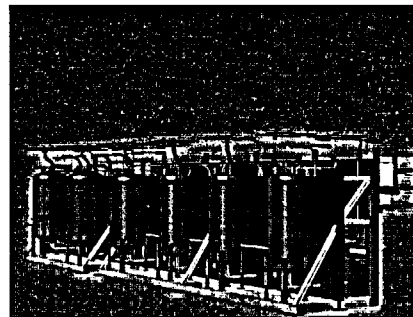
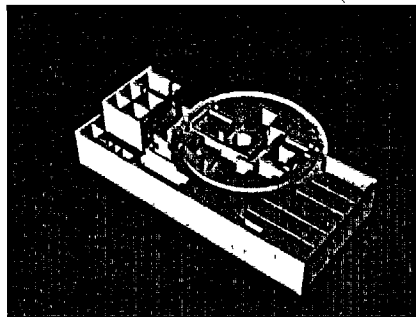
3D model boundaries modified to match schedule activities

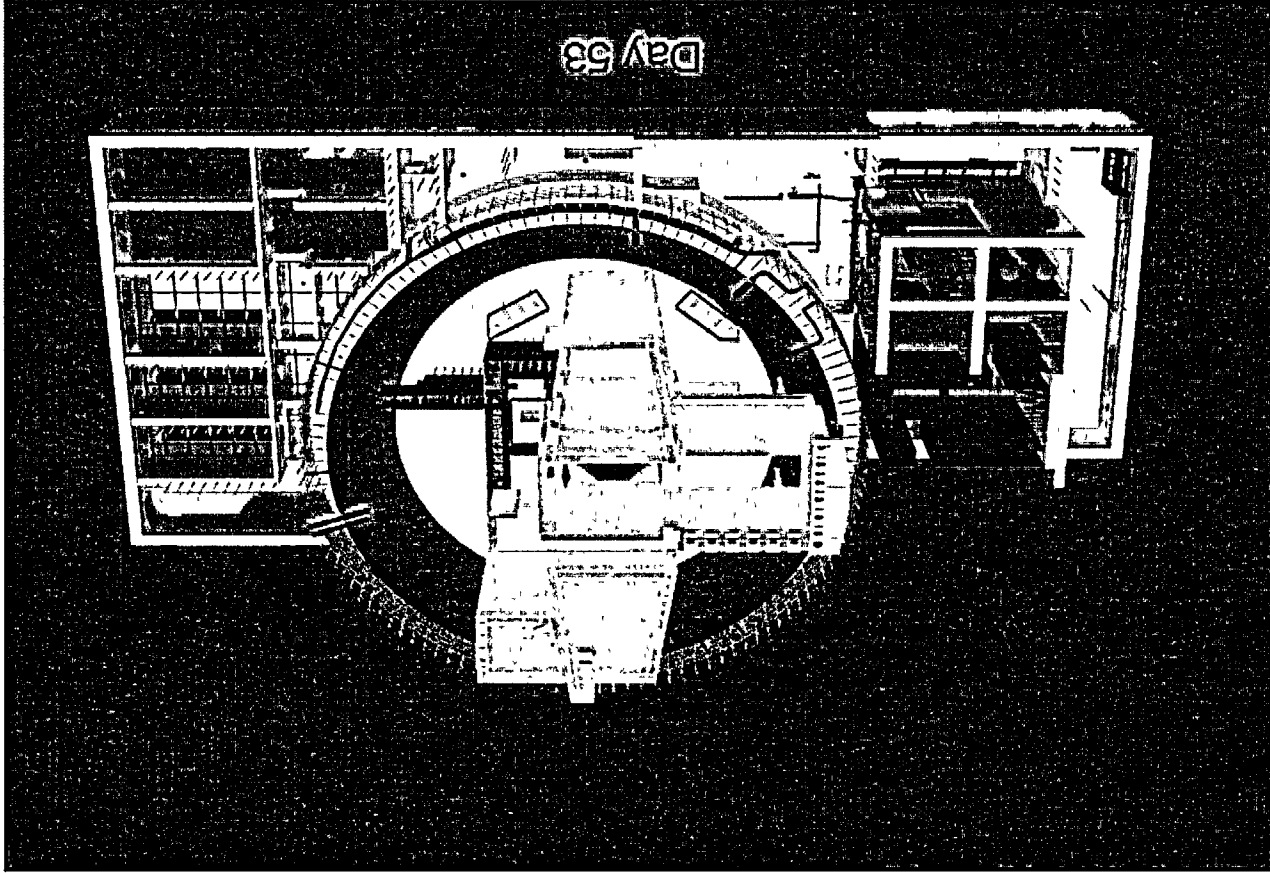
Link by activity

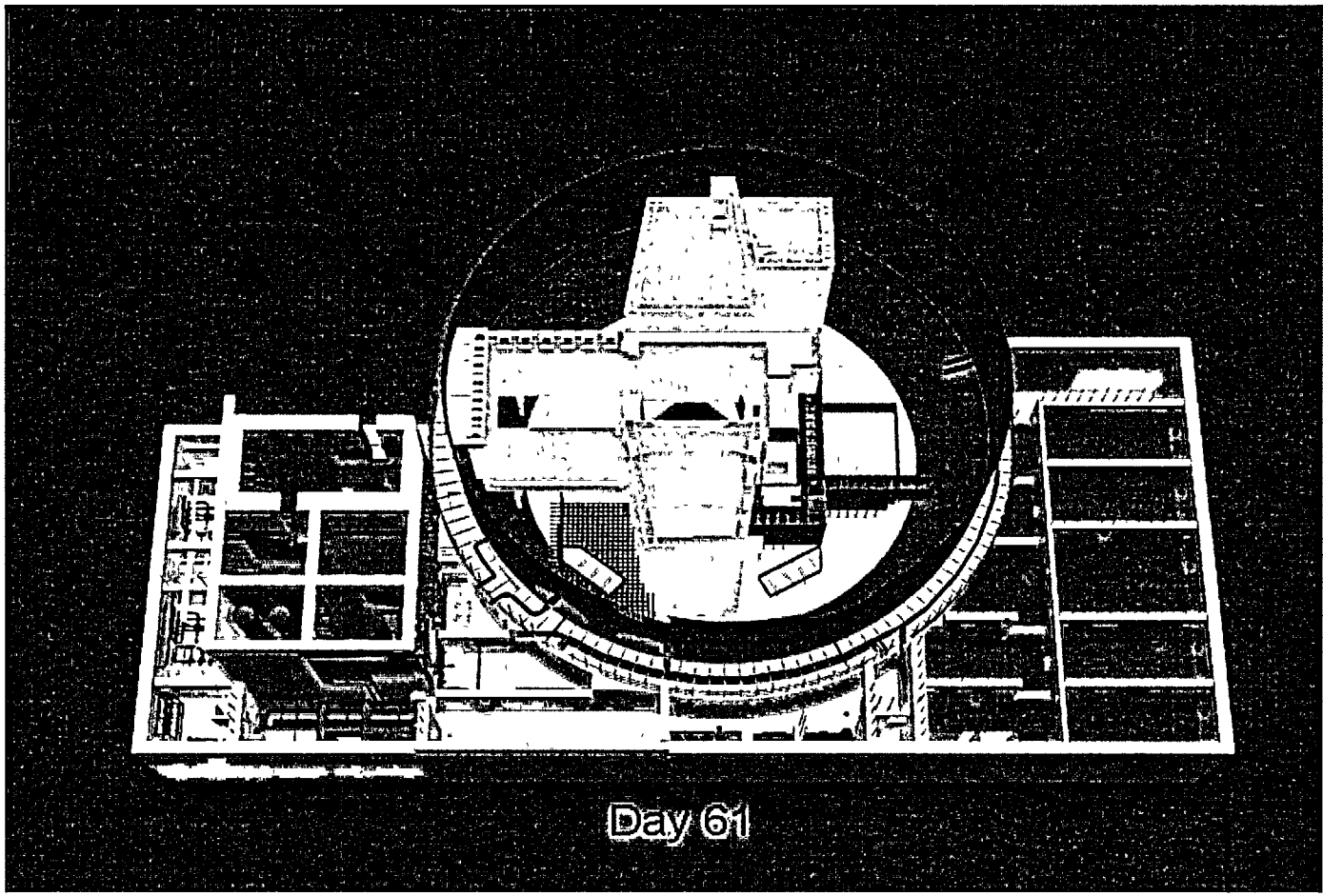
Activity construction durations maintained

Schedule improvements by logic changes only

Visualization capability for changing activity sequences







Summary of Minutes and Action Items