



A novel software tool developed at Pacific Northwest National Laboratory (PNNL) provides project control and risk analysts with side-by-side comparisons of complex, dynamic project schedules.

SCHEDULE VISUALIZER

Side-by-side comparisons of schedule snapshots

GAIN VISUAL INSIGHTS INTO COMPLEX EVOLVING PROJECTS

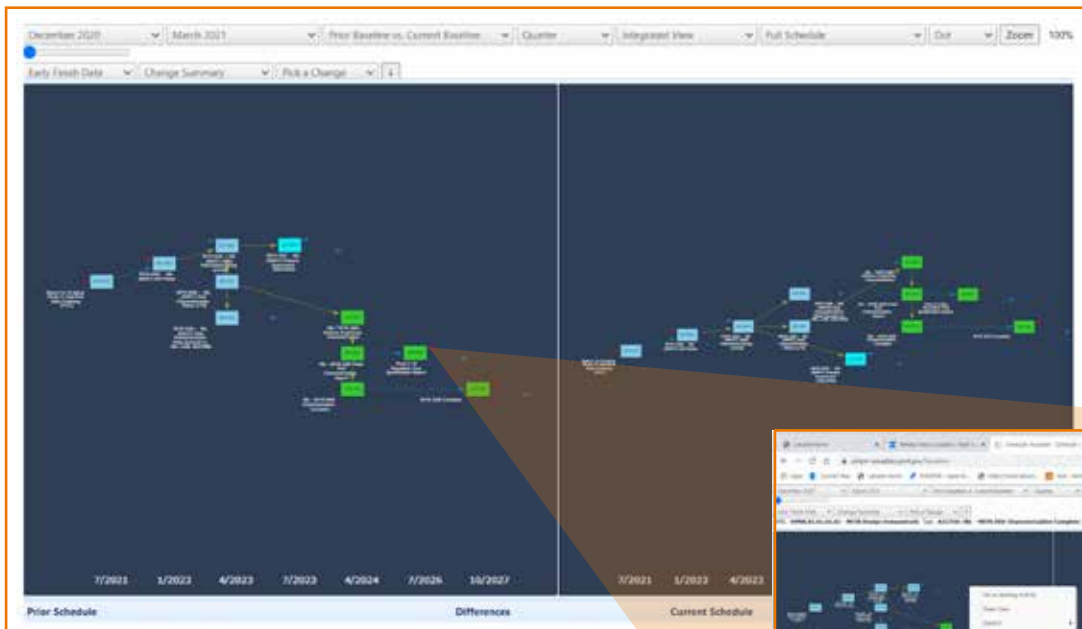
The Schedule Visualizer developed by researchers at PNNL helps users understand the nonintuitive implications to changes made in the schedule, budget, and risks associated with large, multi-year projects with cross-departmental boundaries.

Often, changes in one department can have far-reaching implications in other areas, such as the schedule logic, with no obvious insights into the driving factors. To try and determine implications or understand why milestone dates are slipping, project managers compare Gantt charts and change reports—which can be laborious and uninformative.

The Schedule Visualizer bridges this gap. It generates clear visualizations of evolving, complex schedules to provide important insights to directors, program managers, project managers, risk professionals, domain experts, and project control specialists.

TECHNOLOGY FEATURES

- Split-screen comparisons of two schedules—make visual layout changes to one schedule and the other is automatically updated
- Easily navigate to choose historical schedules
- Render robust schedule layouts or only critical paths
- Evaluate different visualization formats
- Automatically populate drop-down menus with analysis of schedule-based changes
- Intuitive search function
- Complements Gantt chart views
- Compare schedules with and without a realized risk
- Quickly identify nearest milestones and associated changes



Compare project schedules across time scales. Schedule Visualizer complements Gantt chart views in major project risk management software.

COMPARE MULTIPLE SCHEDULE CONFIGURATIONS

PNNL researchers combined network graph theory, computer science, software engineering, and project risk analysis to develop Schedule Visualizer. The software tool enables professionals to consider the impacts of risks on project schedules—such as baseline schedules—with a risk-embedded schedule.

Another feature is the ability to compare multiple schedule configurations, such as the risk-embedded schedule from one month to the next. A user also can compare the probability distributions for primary and mitigated risks.

Before beginning detailed risk analysis, a project risk analyst can use Schedule Visualizer to view differences between various combinations of schedules, such as baseline-to-baseline, baseline-to-risk, and risk-to-risk.

Because the software generates easy-to-understand visualizations of the schedules, it provides project managers with the ability to easily see and compare specific critical paths before and after a schedule change. This yields important information about the impact of schedule adjustments on milestones.

INDUSTRY APPLICATIONS

Schedule Visualizer is available for licensing in all fields of use. With further development, licensees can incorporate the software into existing project management tools or provide it to consumers as a stand-alone solution for managing large, multi-year, and highly complex projects.



Any point along the schedule can be expanded to view more detail with the click of a button.

The software solution is already in use and proven for a U.S. Department of Energy multi-million-dollar project with schedules imported from widely used commercial project schedule risk management software.

The web nature of the application allows seamless visualization of read-only schedules by geographically dispersed users. The software can also be deployed as a stand-alone web application on a user's laptop.

AVAILABLE FOR LICENSING

Contact us to learn more about licensing opportunities. To view all of PNNL's intellectual property, visit pnnl.gov/available-technologies.

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