

## A Simple Tool for Generating Customized NASA Milestone Schedules

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The Operations Engineering Lab (OEL) has developed an interactive editing tool for producing milestone schedule charts called the X OEL Project Planner / Scheduler (XOPPS). It represents an application specific editor with its commands and functions tailored to plotting milestone events and activities on a timeline display. This tool was designed to simplify generation of milestone schedules for project planning based on the standard NASA format. The tool is flexible enough to allow a user to easily configure the display to their preferred look and feel. It has found a wide enthusiastic audience because of its simple, but still powerful capabilities.

Written in C under X/Motif on a Sun Workstation, XOpps is a window based graphical editing tool that provides easy and fast on screen What You See Is What You Get (WYSIWYG) editing capabilities.. XOpps provides capabilities for viewing a full image of the schedule being edited with a header area for text and a schedule area for plotting graphic representations of milestone objects in a flexible timeline. The XOpps tool is object-oriented, but it is unique in its capability for creating objects with date attributes that automatically place them in their correct position in the chart. Each object on the screen can be treated as a unit for moving, editing, etc. through a simple mouse interface for simple control of pointer location. Once created, the milestone schedule is saved to an ASCII file which can be input later into the xopps program for editing or printing. This file creates a list of all the objects contained in the chart and the users configuration for the actual chart display. The ASCII file interface has been especially popular because it allows a user to create simple scripts to produce xopps input files from the files exported by a commercial planning tool. In this way they can get the additional capabilities from their planning tool and still produce a quality NASA schedule.

This paper will discuss the design and implementation of the scheduling tool, especially design tradeoffs between 'keeping it simple' and 'making it do everything for everyone'. We have found that application-specific tools that have most of the functionality users desire are better than many commercial scheduling tools that require training classes to use. Because of high software reuse in our lab, we have been able to build effective tools cheap and fast.

Keywords: timeline scheduling software, project management, object-oriented, graphical user interface