The Problem: Understanding Complex Settings
Modern software is complex. Dialogs often exhibit this complexity in the overuse of widgets. Widgets can be interdependent: the settings of some widgets may affect the states of others. While users can understand widget-level settings, understanding the overall configuration of complex dialogs can be difficult and error prone.

The Approach: Full Sentence Feedback
The states of all widgets on a dialog can be sent through a grammar, which generates an easily readable sentence. The sentence summarizes the overall configuration of the dialog, and uses color to distinguish changes from the previous configuration sentence. This high-level feedback helps users understand and feel confident in their settings.

The Experiment: Scheduling Alerts
Twenty participants - 10 experts and 10 novices - used one of the two interfaces below to schedule alerts. Half the participants used the interface on the left: no full sentence feedback. The other half used the same interface augmented with full sentence feedback, on the right. Measurements were taken for correctness, speed, and confidence.

Test Yourself! For each of these interfaces, try to discern the overall configuration without full sentence feedback. Then, uncover the same interface with feedback, and check your answer.

Experiment Results
When compared to experts without feedback, experts with feedback:
- were more confident
- were slower in completing tasks
When compared to novices without feedback, novices with feedback:
- spent less time viewing task prompts
- were more often correct
- were faster in completing tasks
When compared to novices, experts were [expertise validation]:
- more often correct when neither had feedback
- indistinguishable in correctness when both had feedback
- faster in task completion in both conditions

Confidence Self-Rating (0-6)

Percentage Correct

Time (seconds)

Average Task Correctness Without Feedback, Experts vs. Novices

Average Task Correctness, Novices

Average Task Correctness, Experts

Average Task Times, Experts vs. Novices

Average Task Times, Experts

Average Task Times, Novices

Without Feedback vs. Novices With Feedback

Experts w/o Feedback

Experts w/ Feedback

Novices w/o Feedback

Novices w/ Feedback