New Developments for ROBERT
Assisting Novice Users Even Better in DIY Projects

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Motivation:
- Do-It-Yourself projects can be hard for novices – due to lack of knowledge, fear, or inexperience.
- ROBERT helps them to complete projects, allowing them to successfully perform other DIY projects in the future.
- ROBERT guides its user with a step-by-step instruction through the DIY project. The instructions are generated by a planner – each action is one step in the instruction.

Abilities:
- HTN Planning – generates plan and abstraction for orientation
- Ontology Manager – stores background knowledge, selects appropriate texts, images, and videos for each action
- Dialogue Manager – controls dialogue between user and system, sends request of the user to appropriate component

We added two new abilities to ROBERT:
- Changing plans if the user requests
- Proactiveness using connected tools

Users might have preferences which we can't elicit before using ROBERT, but planner has to choose one alternative.

Changing Plans:
→ Allow user to change the plan!
→ Interpret requests as Linear Temporal Logic formulae e.g. $\phi = G\neg\text{sawElectric} \land E\text{awManually}$
→ Find plans that satisfy $\phi$, i.e. $\pi \models \phi$