

Adaptivity in COTS products



Adaptivity in Outlook

Some have a clean desk, others have piles of documents everywhere, and few have assistants that clean their desk daily. Do those with a clean desk have a clean e-mail inbox as well? Without having done any research, I guess they do!

The COTS product Outlook from Microsoft for email offers rules to perform simple clean-up tasks similar to the daily job of the assistant but for no extra charges. Remember the Windows assistant named Clippy introduced in Office 97? Based on Bayesian Networks, it was considered advanced technology from Artificial Intelligence research. Around the same time rules in Outlook were introduced. In contrast to Clippy this is simple technology that is still in use today.

It looks like you're writing a letter.

Would you like help?

- Get help with writing the letter
- Just type the letter without help
- Don't show me this tip again



This is the first in a series of columns to assess the use of business rules in Commercial Off The Shelf products (standard software) to enhance the adaptivity of the product for personal usage.

Rules in Outlook have the following form: WHEN event; AND IF condition(s); DO action(s); UNLESS exception(s). A wizard guides the user in steps to select template actions, conditions and exceptions. The templates contain parameters that may be adjusted by the user. A typical

example with parameters underlined is:

Apply this rule after the message arrives
from Jim Doe
and with invoice in the subject
print it
and flag message for check within 1 days
and forward it to accountant
and move message to the finance folder

The natural language rendering reads well enough to make sense and an action does something that the user could have done manually. As a result:

Outlook rules are intuitive to understand for someone that is familiar with Outlook functionality.

A rule may be named and has an optional description. Conditions must all be met for the rule to be applied. If two disjunctive conditions (condition 1 OR condition 2) should result in the same action you have to create two rules. So the set of rules is actually in disjunctive normal form from a logical perspective? No, because multiple parameters are handled as a disjunction. So if you want to test two consecutive words in a subject, you have to create two rules as is well described in <http://www.msoutlook.info/question/220>. Also the execution algorithm does not handle the set of rules as logical clauses because it is possible to have conflicting rules or circular rules. How are conflicts handled? Not at all. The user may handle conflicts by changing the order in which rules are applied. To avoid circularity there is a special rule with the action 'stop processing more rules'.

Do Outlook rules really help to adapt it for personal usage? Yes, I believe it does for those that have a natural desire for a clean desk policy and are willing to invest in managing those rules. Rules are not the only way to adapt Outlook for personal usage. See the comment from Miranda Lintermans on my first post. She has used customized fields on her private task forms and defined her own views on these tasks. Flexibility on behavior and flexibility in data should go hand-in-hand.

What could be improved from a 'business rules' perspective?

Ask why? Answer because...

Actions are performed based on rules but once performed there is no way to find out why the action has been performed. Wouldn't it be nice if the header of a message would say:

This message has been moved by rule name> on date> from Inbox to Deleted items because it contains the word ...>.

Introduce logical inferencing

Outlook rules have to be ordered because there is no logical inferencing. Rules that categorize an e-mail have to be processed before the rules that move e-mail to a folder based on their category assignment. Therefore the user should order the rules in the right way. Why can't we leave that task to the computer by using an inferencing algorithm that processes the rules in the right order on a when-needed basis?

Extend the semantics to multiple objects



The condition criteria that can be selected are all related to a message. But Outlook also manages tasks, people, notes etc. I would like to highlight a message in my inbox from someone that I have an appointment with today (or now). Or forward a message from someone that has a work address in the USA. My thinking is unlimited

Next in this series is about Rules in Salesforce.

Let me know if you have been the one reading more than 700 words by liking this post.