An Adaptive, Emotional, and Expressive Reminding System

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Objectives of TamaCoach:
- adaptive notification system for todos/events
- emotional and expressive: inform and incite the user
- virtual coach for personal time management

Learns from
- iCalendar data
  - descriptive fields (categories, alarms...)
  - temporal distances
- historical data
  - observed delay and duration for a category
  - number of reminders and distance to last reminder
- user-context: (busyness, mood, activity, location)
- device-context: (type, sound, network)

In two steps
- categorization of tasks/events
- selection of a set of notifications

To produce combinable reminders
- item in GUI pending list
- pop-up dialogue
- e-mail
- mobile e-mail
- sound

Gets user feedback
- explicit replies: to reminders (GUI/e-mail)
  - Accept: useful notification (++)
  - Later: to be reminded again (+)
  - Too early: to be reminded again (-)
  - Ignore: ignore this kind of item (-)
  - Too late: useless reminder (-)
- implicit replies: by updating iCalendar data

Adaptive
- learns about user habits and preferences to adjust its behaviour

Expressive
- communicates about its emotional state

Engaging, but not non-intrusive
- cartoon-like character, not human-like
- no speech
- few expressed emotions

Inform the user
- about the “self-satisfaction” of the interface agent

Incite the user to interact
- fun factor, guilt...
- more interaction should lead to better organization

Emotional
- simulates human or animal emotions

Current prototype
- graphical and e-mail user interface
- XCS-based modules + reward system
- user and calendar simulator
- Python + Qt, on desktop PC (Linux), laptop PC (Windows) and Zaurus (Linux)

Issues for TamaCoach
- learning module and input data (under evaluation)
  - lack of semantic and consistence of iCalendar data
  - lack of explanations for the user
- feedback and reward system (under evaluation)
- effectiveness of expressing emotions (to be implemented)
- requirements for a virtual coach... (to be defined)

Global mood = alternative reward