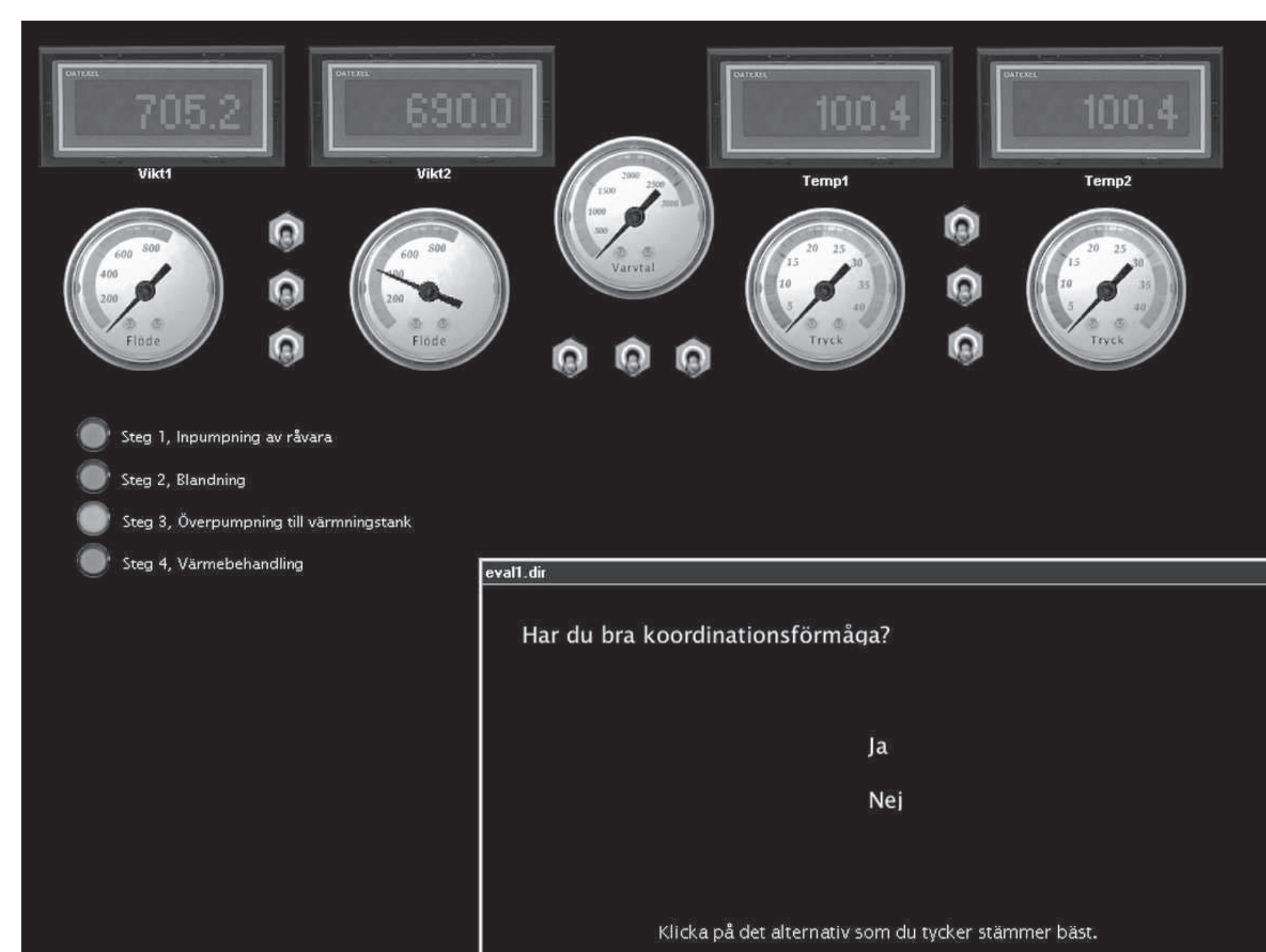


## The BreakBits Interface

The BreakBits interface is intended as a complement to the traditional, mainly graphical, interface. The aim is to help the user concentrate on the most relevant information by giving musical guidance.

Rather than directly mapping different sounds to specific events, the purpose is to continuously present information about the status of the processes in the user environment in an emotional and discreet manner.



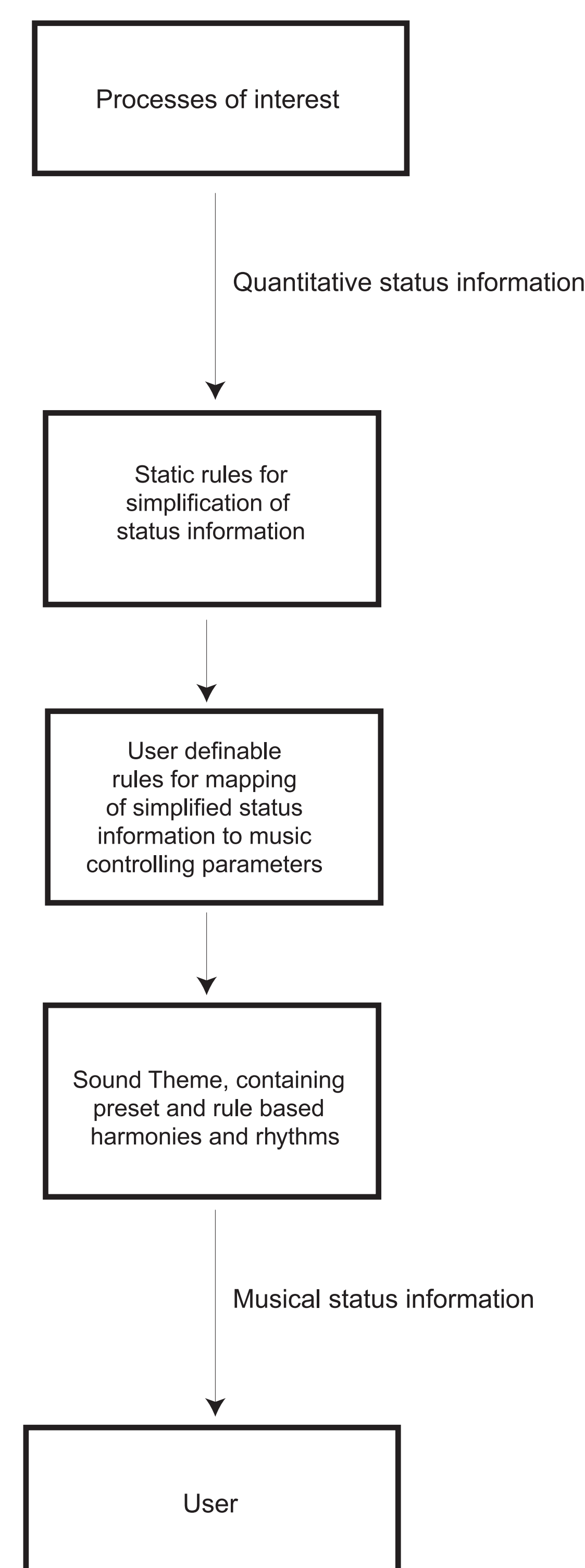
*The BreakBits evaluation application*

## Testing the interface

The BreakBits interface was tested using a mock-up application, designed to resemble an industrial process monitoring system. LED displays, together with analogue gauges, monitored a fictive manufacturing process.

We composed suitable music, where the harmonies, rhythms and events corresponded to the events and parameters in the manufacturing process. A raise of the temperature in the system caused the music to get slightly out of tune, a spinning wheel whose speed got below its ideal speed, caused a slow drum rhythm to appear, etc.

Almost all users thought that the music in the second test helped them very well to distinguish the different stages of the process. Many also pointed out that the music made them feel more relaxed, since they did not have to continuously concentrate on the gauges and displays. Several users commented that "time passed faster" using the musical interface.



## Feel the rhythm

Film music studies show that movie music tends to use a rather predictable and well-defined language, mapped to different kinds of moods, genders, characters and events. We believe it could be possible to define a musical language, mapped to processes and states in a computer or industrial process, even when using music from very different genres.

The strengths of tonal parameters are that they can be used to represent a large set of identifiable states, events and applications, within the computer environment, much like music can identify a mood, a character or even a specific actor in a film.

*When using BreakBits, the system administrator will be aware of the status of the network and servers by listening to different parameters in his favourite music*

## Advantages

- | Applications and processes become "actors" and "scenes" in the musical context.
- | The music amplifies awareness, rather than amplifying events.
- | The user can focus on what's important for the moment, but still "feel" the state of background processes.
- | The information becomes less restricted by attention and physical location.

## Future

- | Combine the continuous music with event driven sounds.
- | Allow the sharing of musical "themes", just as "desktop themes" and "skins" are shared today.
- | Link sound themes to specific users, in an operating system directory service (Active Directory, LDAP)
- | Control the level and intensity of the music according to the users position, relative to the actual interface (computer)

*Using only a graphical interface, the system administrator has to keep an eye on the monitors to be aware of the status of the network and servers*