

Notifications

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Introduction

The notification mechanism is partly built into the Perspectives Distributed Runtime, partly modelled in `model:System`.

```
case ContextWithNotification
  thing Notifications (relational)
  property Message (String)
  user NotifiedUser
  perspective on Notifications
  action DeleteNotifications
  delete role Notifications
```

Add `ContextWithNotification` as an Aspect to a context that you model to receive notifications. It adds the role `Notifications` and the InPlace graphical user interface has a place to show them.

Actually, this place is visible only when you visit the context itself. Nevertheless, when a notification is generated, it will appear as a notification on screen, using the operating system notification mechanism.

Notification in the system context

Notifying by adding a role to a context is somewhat of an antipattern when you want to notify the user on exit of a context. Consider what happens: your on exit action is run, it adds a `Notifications` role instance to the context - which is then instantly removed with all of its roles!

The graphical client, however, relies on displaying the `Notifications` instances in a context. Clearly, this should not work and it does not. To clarify the mechanism further, it is not even shown transiently using the operating system notification system; this, too, is only triggered when a new `Notifications` role instance is detected.

In such cases you can resort to

- either notify in the embedding context, where the contextrole pointing to the context is removed (create an `on exit` there);
- or notify in the system context.

The former requires you to add the `ContextWithNotification` Aspect to your embedding context. To achieve the latter, you don't use Aspects at all. The system context is the default where `Notifications` are stored when they are not stored in a specific context.

The disadvantage of the latter mechanism is that your users will have no clue as where to look for notifications, once they've disappeared as pop ups or fly overs on screen.

Future extension

We will make it possible to specify the context in which you want a `Notifications` instance to get stored, e.g. like this:

```
on exit
    notify <UserRole> in <ContextType>
        "Hello there!"
```

This would require `<ContextType>` to have Aspect `ContextWithNotification`. The advantage of this syntax is that you can specify the message locally in terms of roles and properties.