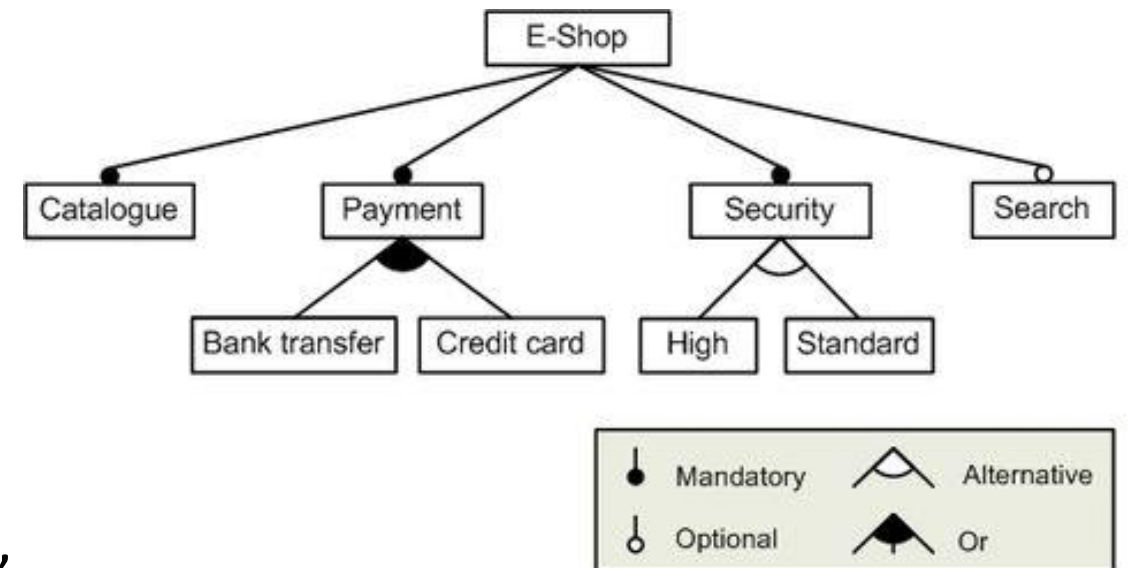# Treinamento – Experimento

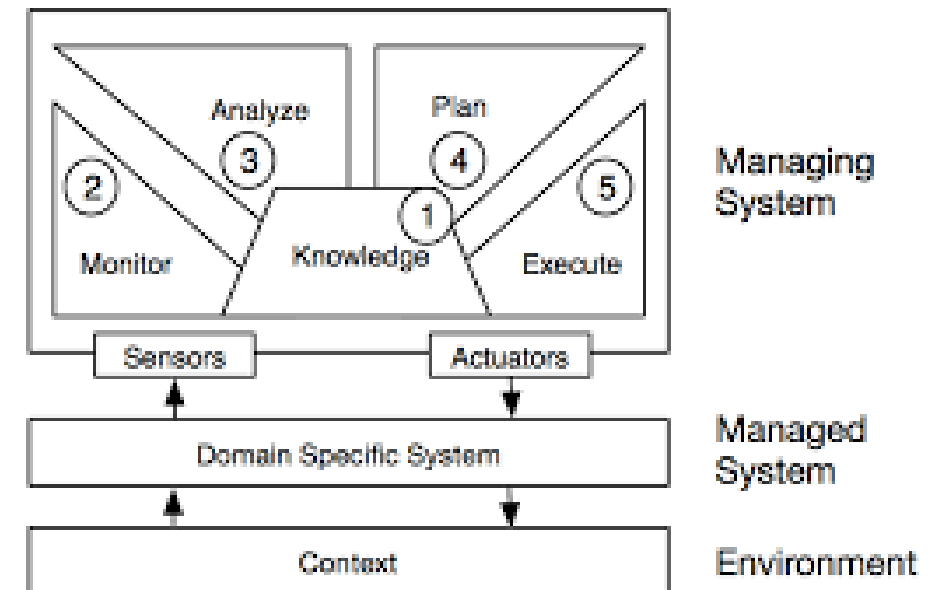Ismayle Santos (July, 2017)

Software Product Line

- Family of systems
- Feature types
  - **mandatory**, if it must be available for all products; or
  - **optional**, if it may be unavailable.
  - **Or-group**, at least one feature in that group should be present
  - **Alternative group**, at most one feature in that group should be present. Finally, the dependencies
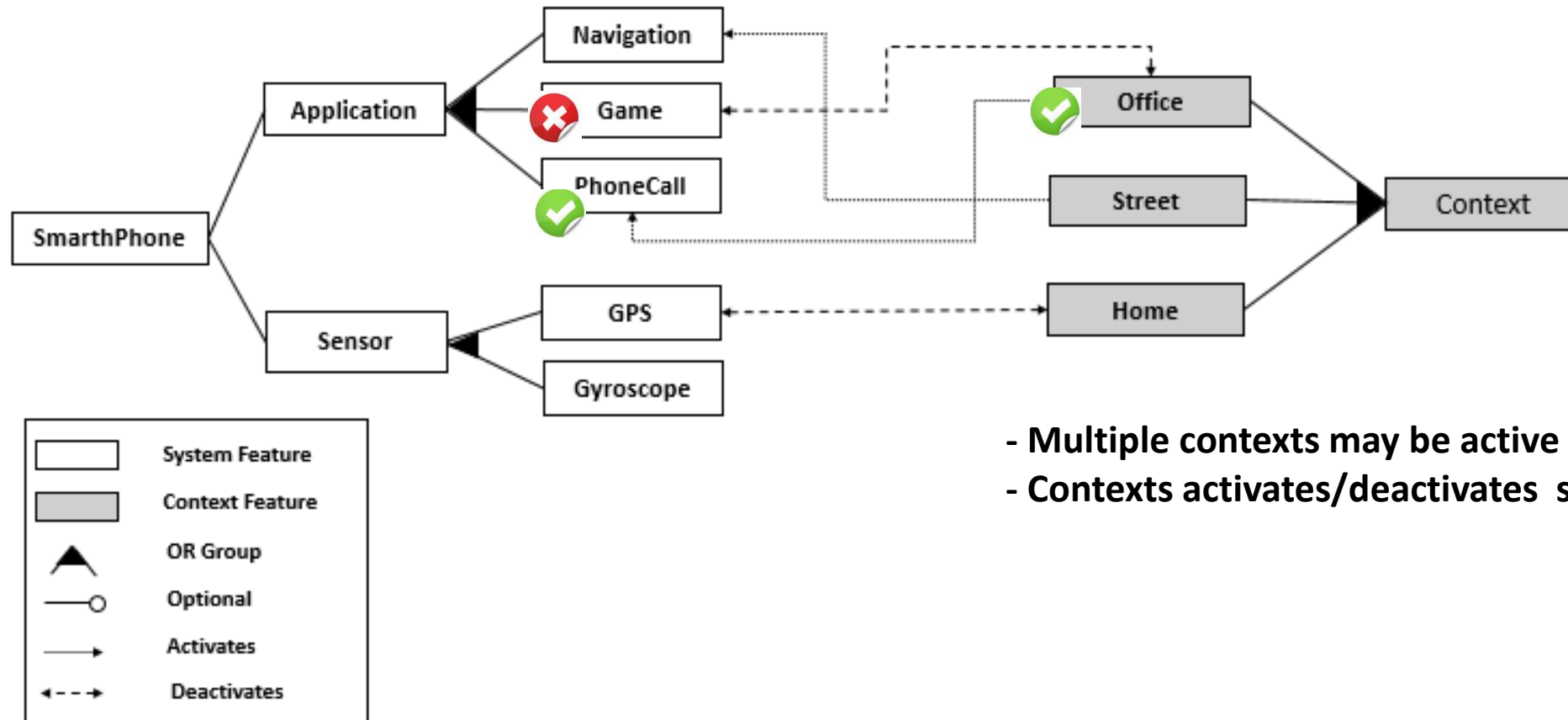
Dynamic Softaware Product Line

- Contexts represent distinct states of the environment
  - Example: Location=HOME

- Context triggers reconfiguration of the DSPL, i.e., the generation of a new valid product configuration
  - DSPL can support changes in the environment

Context Aware Feature Model

- **Multiple contexts may be active simultaneously**
- **Contexts activates/deactivates system features**

K. Saller, M. Lochau, and I. Reimund, "Context-aware dspls: Model-based runtime adaptation for resource-constrained systems," in Proceedings of the 17th International Software Product Line Conference Co-located WorkShops , ser. SPLC, 2013, pp. 106–11

Testing the Adaptation
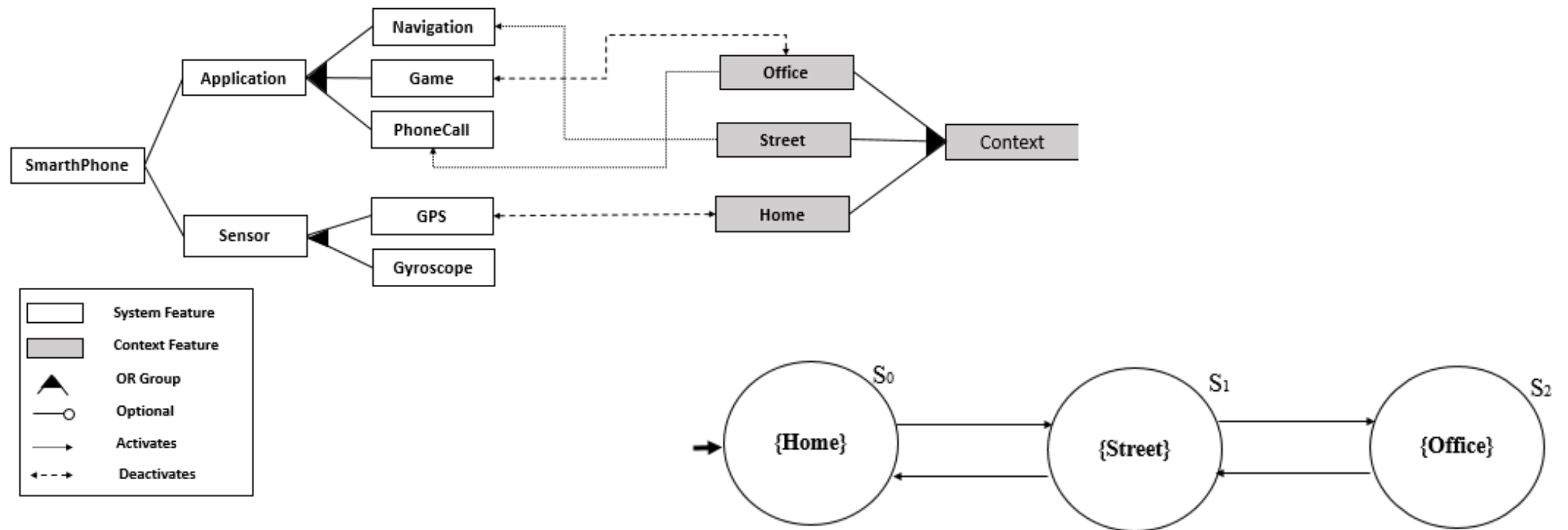
The activity is to specify a *sequence* *of test cases to test the adaptation mechanism (activation/deactivation of features according to the contex)*

ORDEM	Context	ON (activated)	OFF (deactivated)
1	HOME		GPS
2	OFFICE	PhoneCall	Game
....	....	.....	....

Training with the TestDAS

Using TestDAS with SmartPhone DSPL
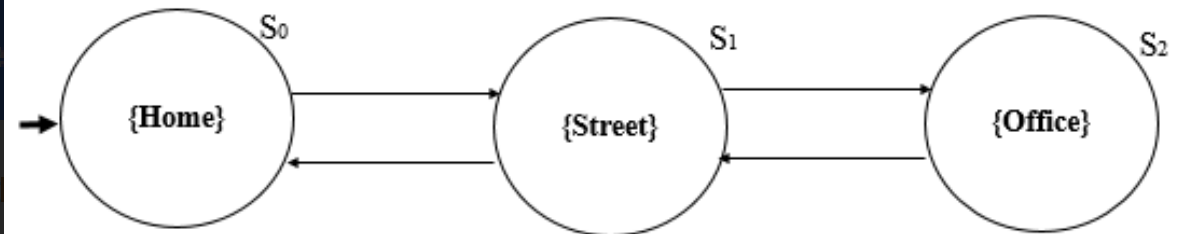
- Context Evolution Model

Using TestDAS with SmartPhone DSPL

- Specifying the Context Evolution Model in the TestDAS Tool

Using TestDAS with SmartPhone DSPL

- Test Sequence

```
{
"id":1,
"contextState":[
    "Home"
],
"expectedFeatureStatus":[

],
"actualFeatureStatus":[

]
},
{
"id":2,
"contextState":[
    "Street",
],
"expectedFeatureStatus":[
    "Navigation"
],
"actualFeatureStatus":[

]
}
```

Thank You