
From Feature Models to Variation Representation in MSCs

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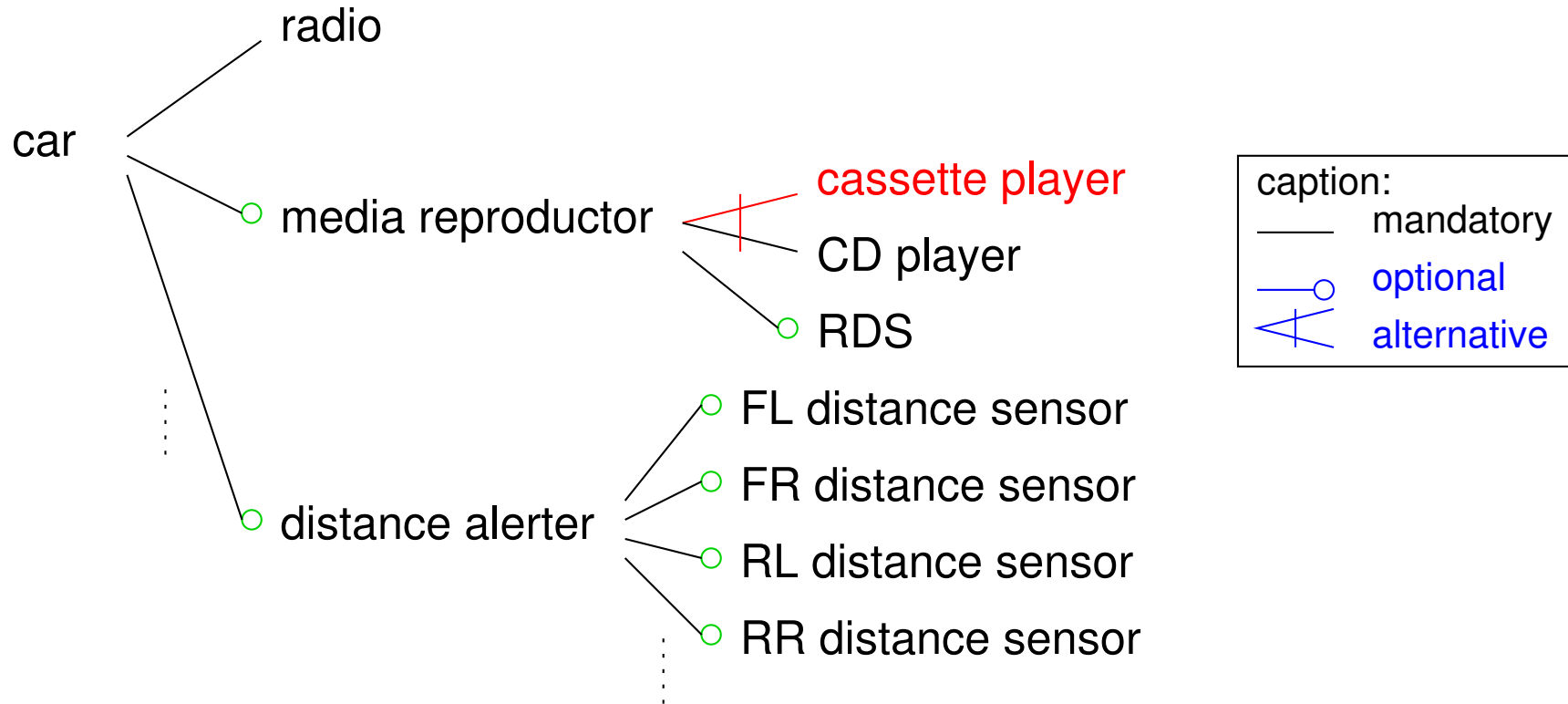
Introduction

Reuse of a case study which shows high degree of communication, in order to

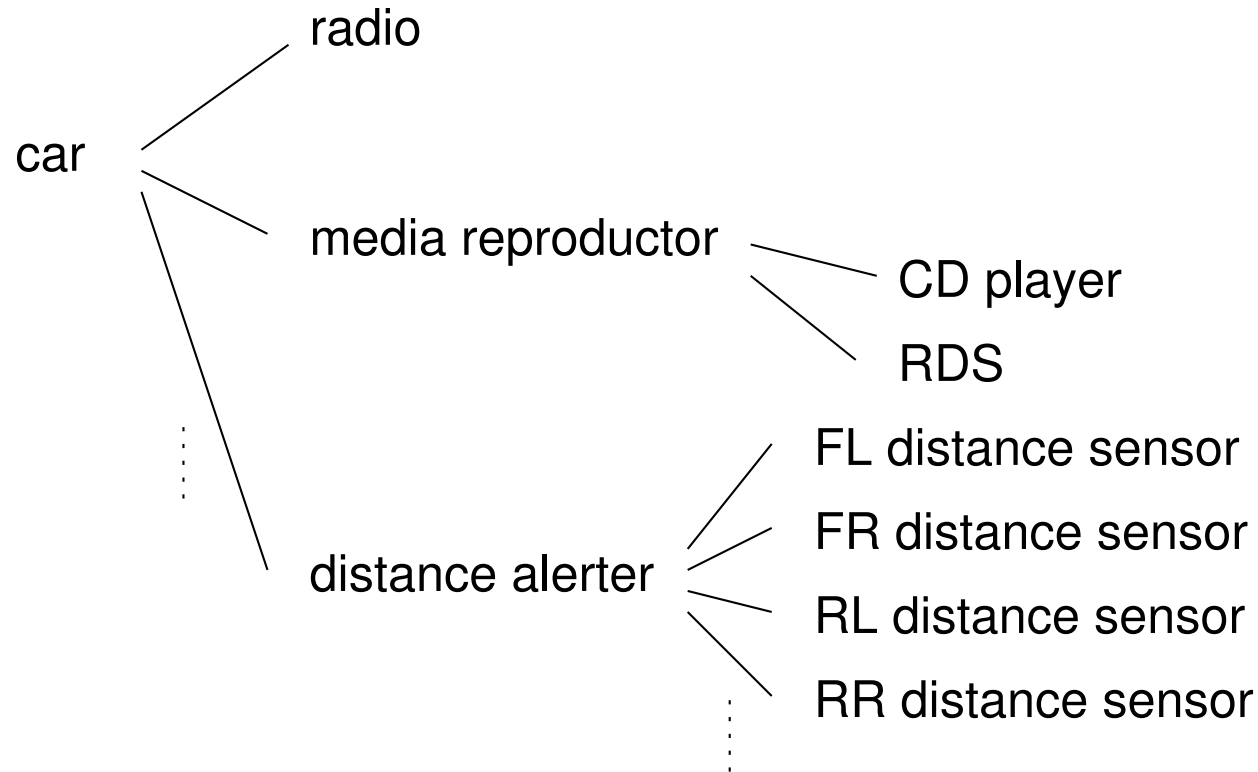
- enhance it with explicit interface specification (connector construct),
- extend it by several variants,
- avoid a specification tailored to meet our expectations.

S. Wagner, M. V. Cengarle, P. Graubmann, *Modelling System Families with Message Sequence Charts: A Case Study*, Tech. Rep. TUM-I0416

Feature models

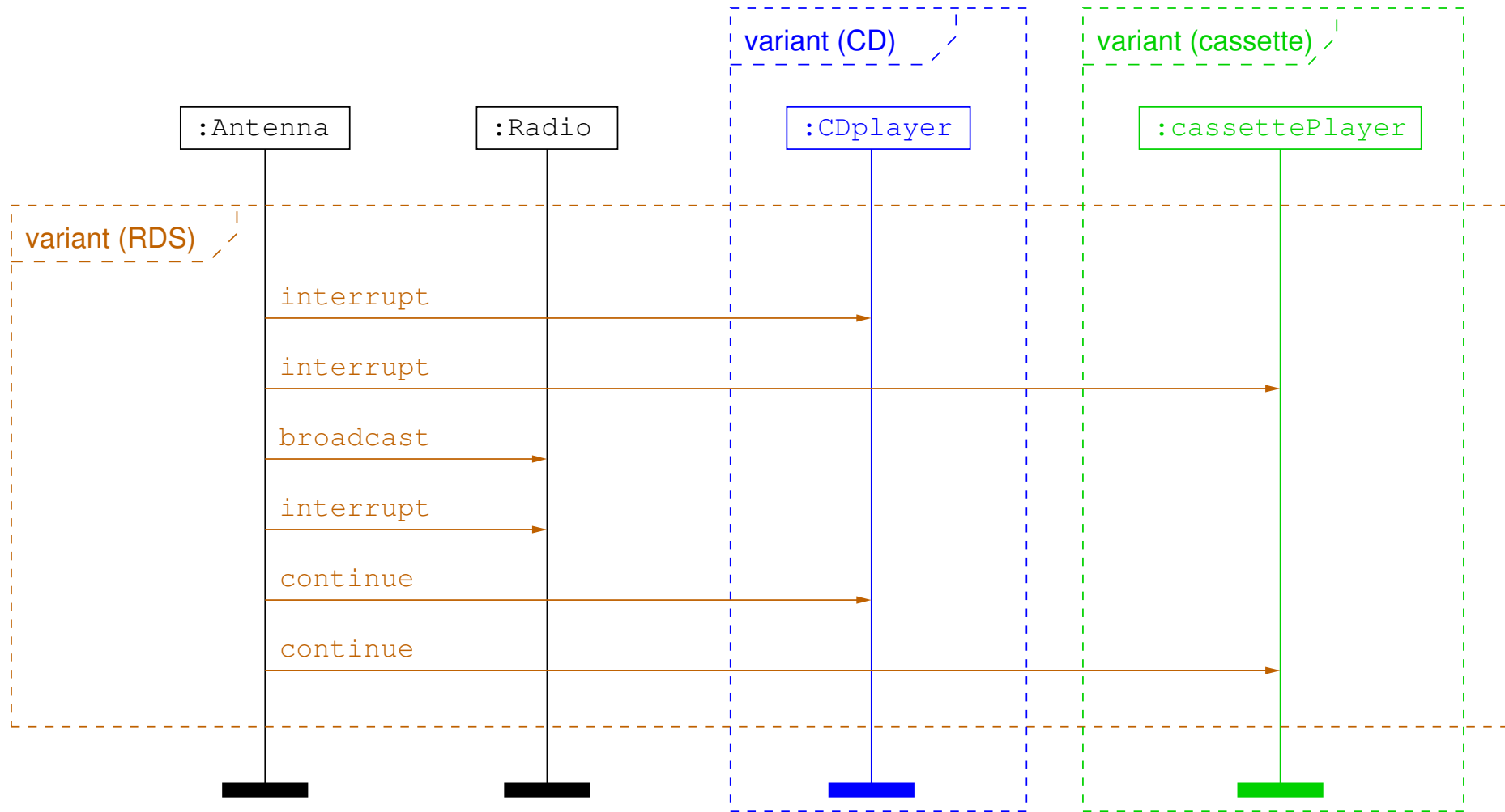


Configurations

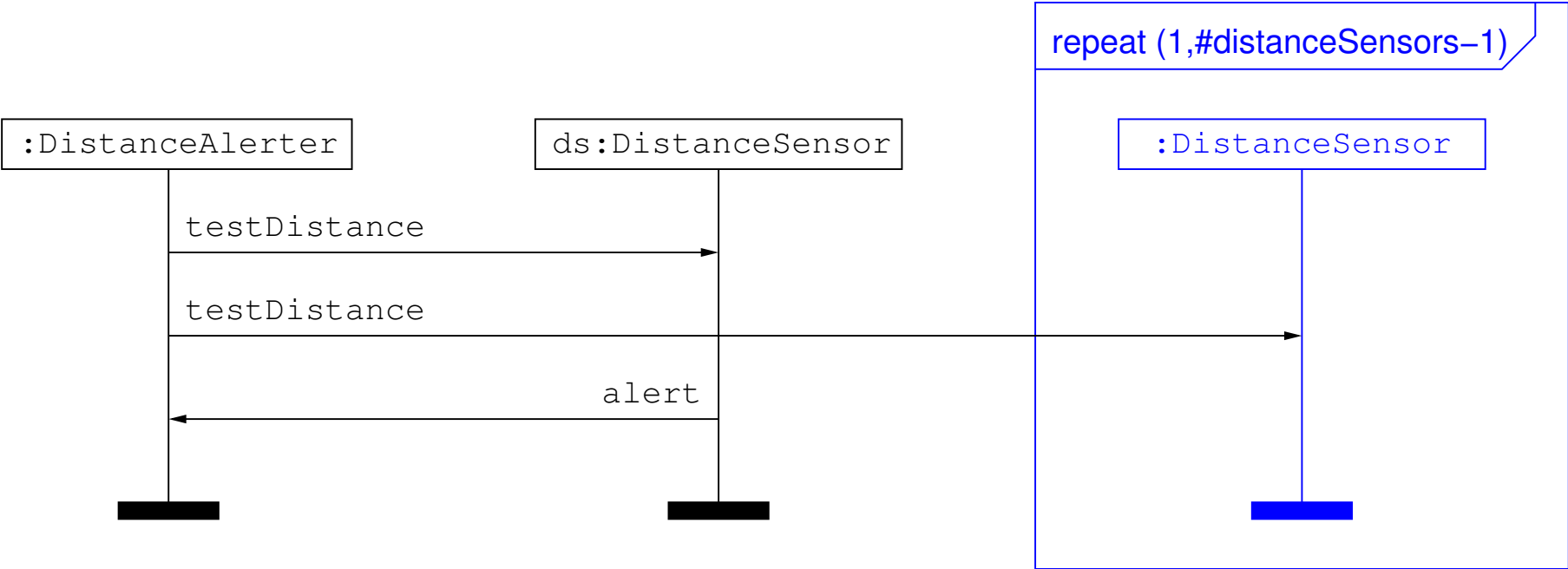


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MSC with variations



repeat construct



Informal semantics

Given a configuration,

1. MSCs with variants (and possibly with **repeat**)
→ MSCs without variants (and possibly with **repeat**),
2. MSCs with **repeat** → MSCs without **repeat**.

Outlook

- Formal semantics:
 - Defn of the possible configurations of a feature model
 - Defn of a variable substitution given a configuration
 - Roles within a **repeat** construct
 - TRS for the elimination of **repeat**
- Methodic process for the derivation of variation points and variants as well as of their occurrences in MSCs
- Embedding in a broad development process for system families like e. g. KobrA