SDL in a changing world

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Introduction

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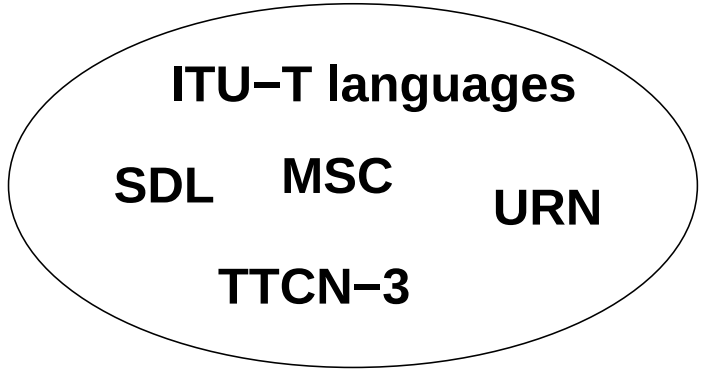
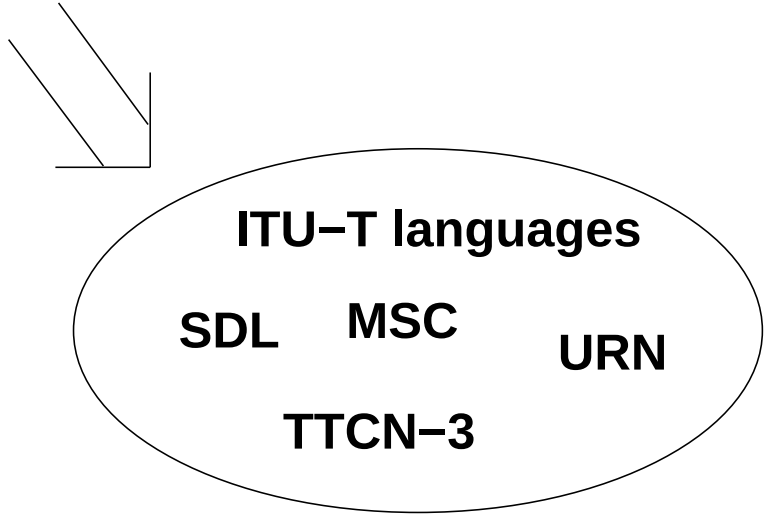
  - new developments in specification and modelling
- What this means for the ITU-T family of languages . . .
- and the current SDL revision.

Influential trends



Influential trends

Ubiquitous and pervasive computing



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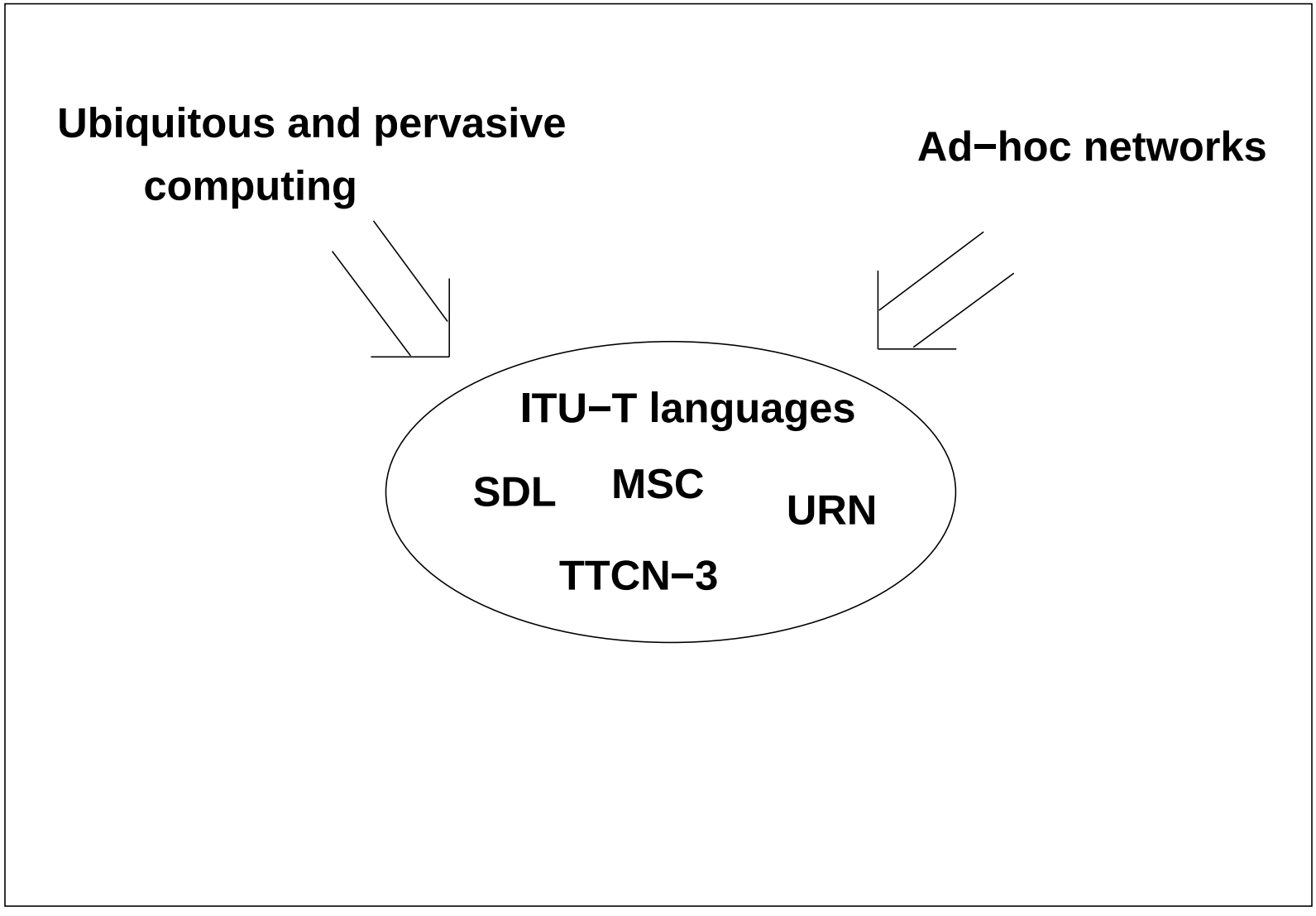

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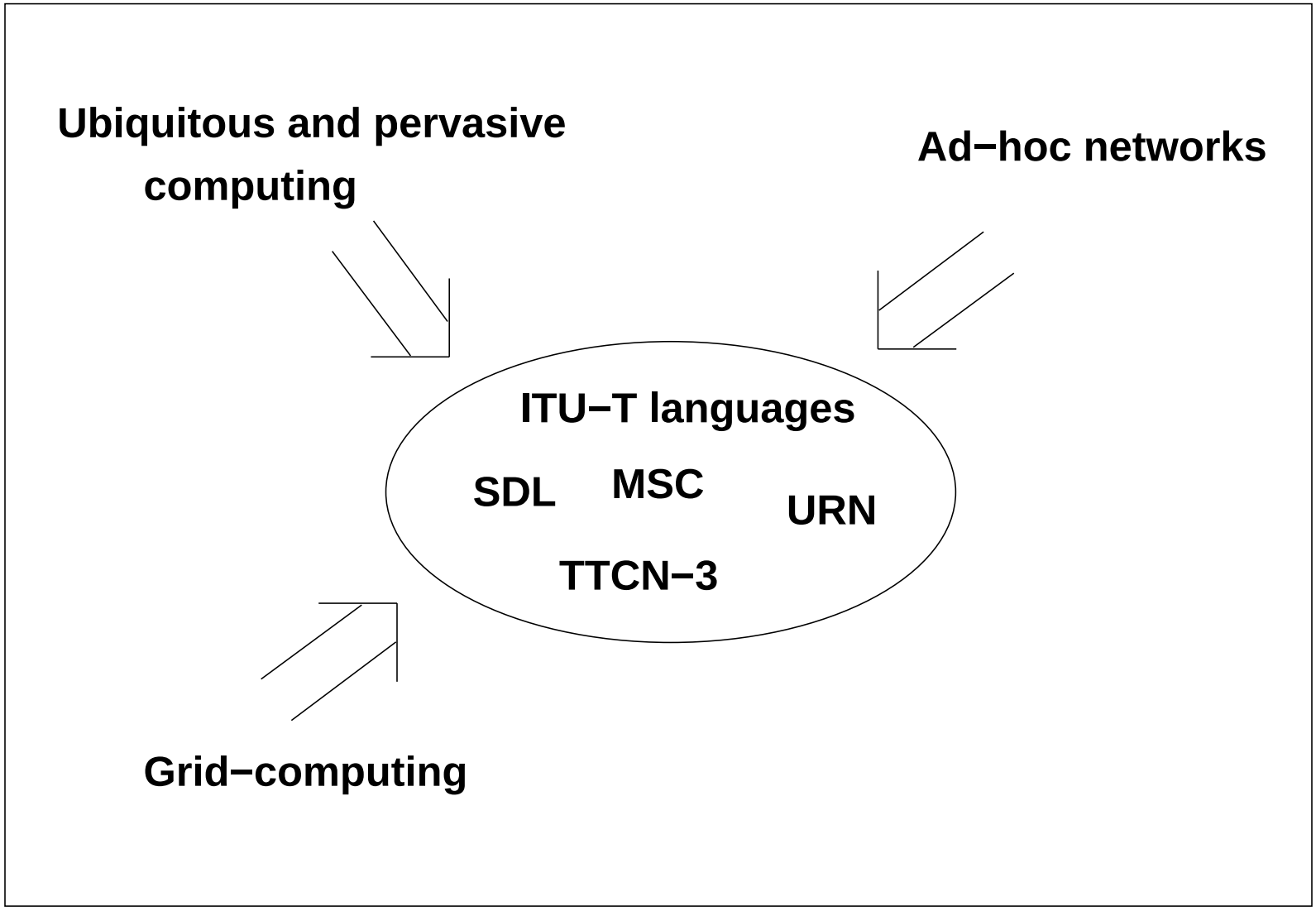

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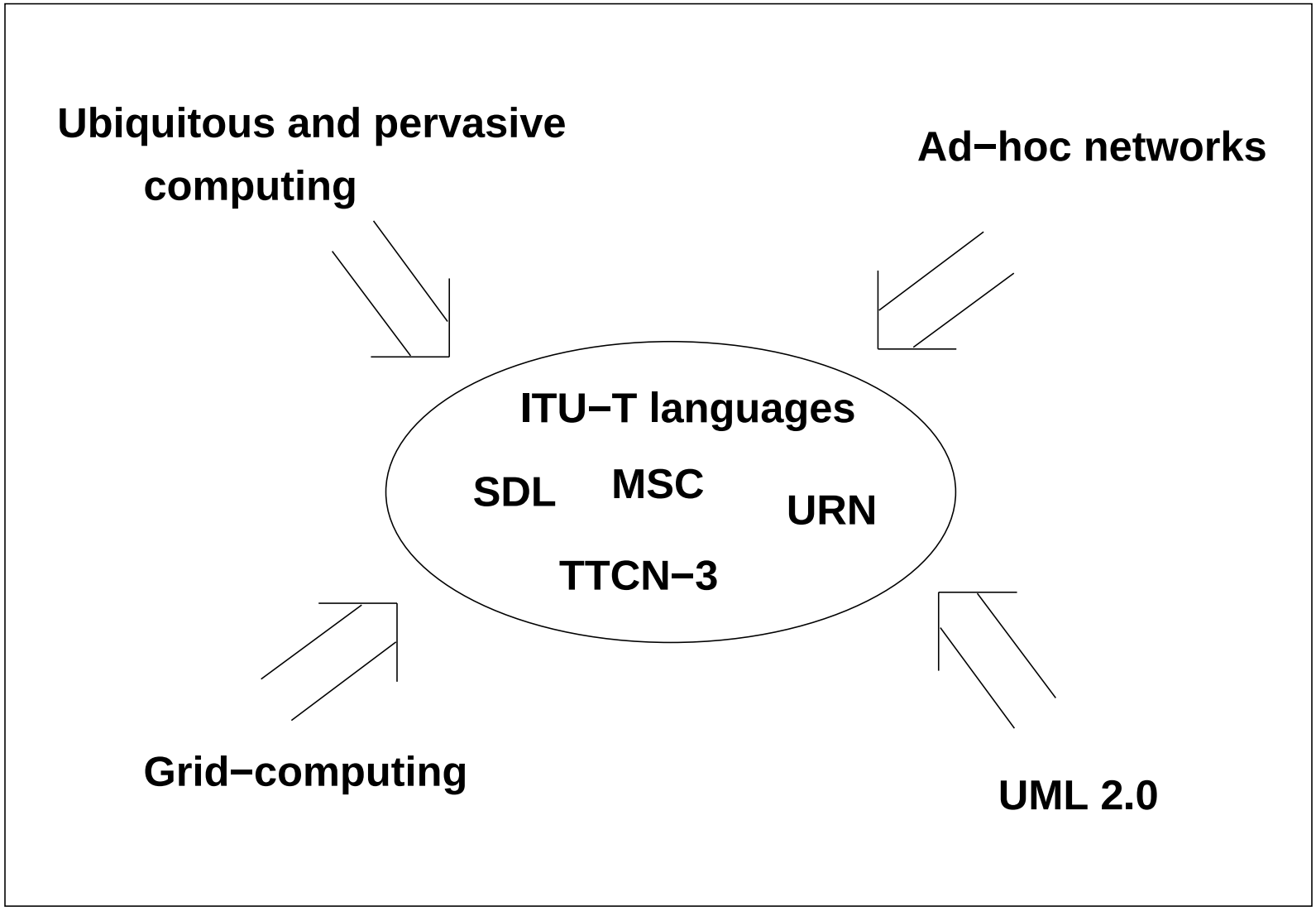

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- Networks formed on an ad-hoc basis
- Use of standard, open, general-purpose protocols and interfaces expected
- Many kinds of devices and interaction
- Nontrivial quality of service requirements

Demands on models

- Active entities
- Exchange of signals and of data
- Dynamic (re)construction of communications infrastructure

Modelling Languages

- The ITU-T languages
- UML 2.0
- SDL and UML convergence

Dynamic Modelling with UML 2.0

- Activity diagrams – Petri net semantics
- Active classes and objects
- Behavioural state machines – object life cycle
- Protocol state machines – environment and interfaces
- Influences: ROOM, Harel state charts, OMT, SDL.

SDL-UML convergence

- UML 1.5 profile: recommendation Z.109
- IST project OMEGA profile
- Moda-Tel review
- ETSI Specialist Task Force 250

Extending UML 2.0

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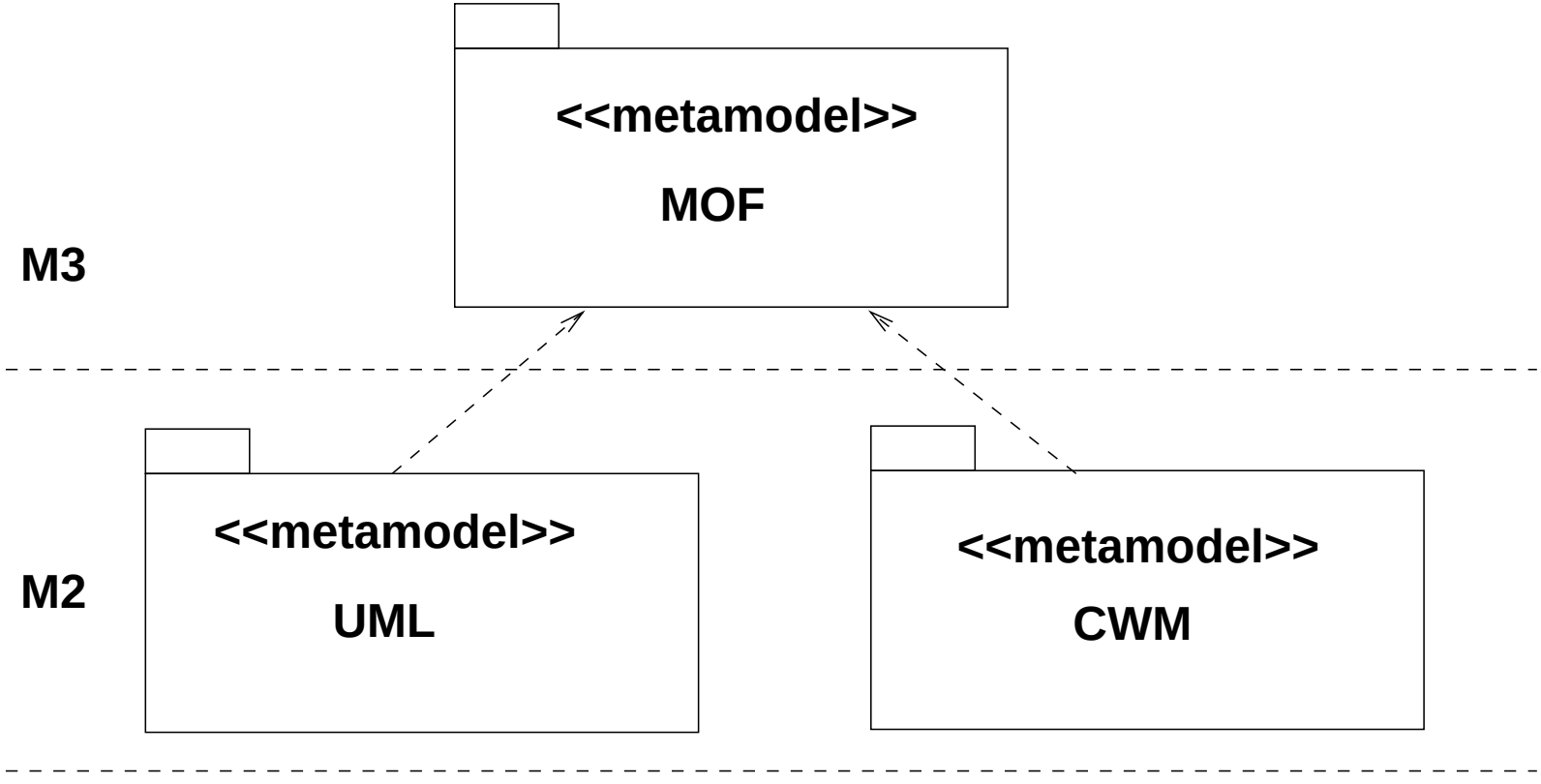
- Relationship with MDA

Alternative Metamodels



UML 2.0 Infrastructure, p 26

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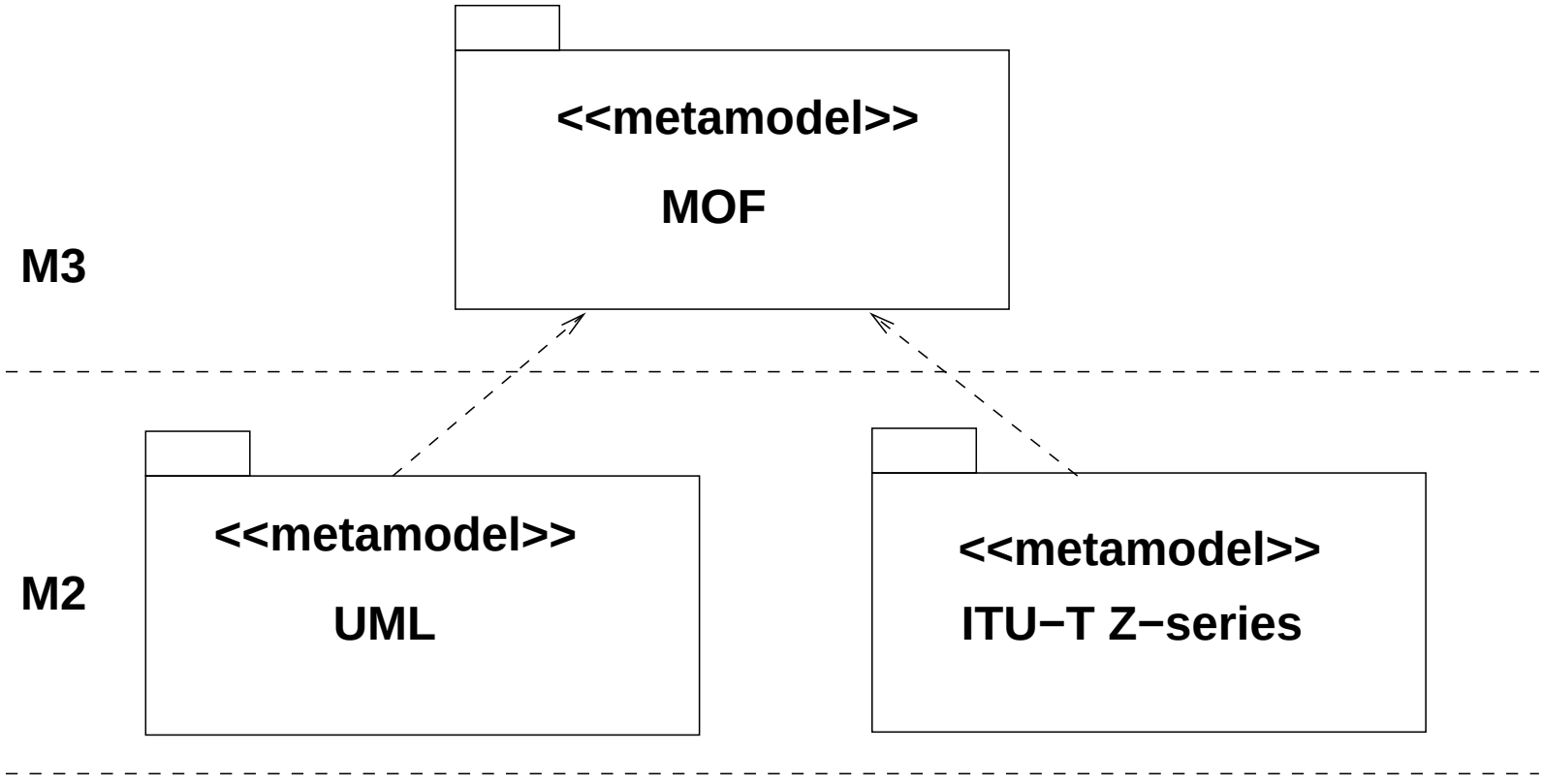

Strengths of ITU-T languages

- Primary focus on communications domain
- Direct influence of ITU study groups

SDL: the current revision

- External influences
  - emergence and growth of new kinds of communications devices and networks
  - position of SDL with regard to UML 2.0

SDL: the current revision

- External influences
  - emergence and growth of new kinds of communications devices and networks
  - position of SDL with regard to UML 2.0
- Internal influences
  - economical disincentives and technical challenges that discouraged full support for SDL 2000
  - work of SDL task force in identifying the simplest useful subset of SDL

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- Review output of ITU study groups, with particular attention to emerging areas
- Evaluate relative merits of UML profile vs full-blown metamodel.
- Look into the possibility of defining an SDL core, like the UML core
- Conduct market research with tool users and tool vendors

Conclusion

- SDL has proved equal to past challenges
- but – complacency is not appropriate
- The immediate future holds exciting challenges and opportunities