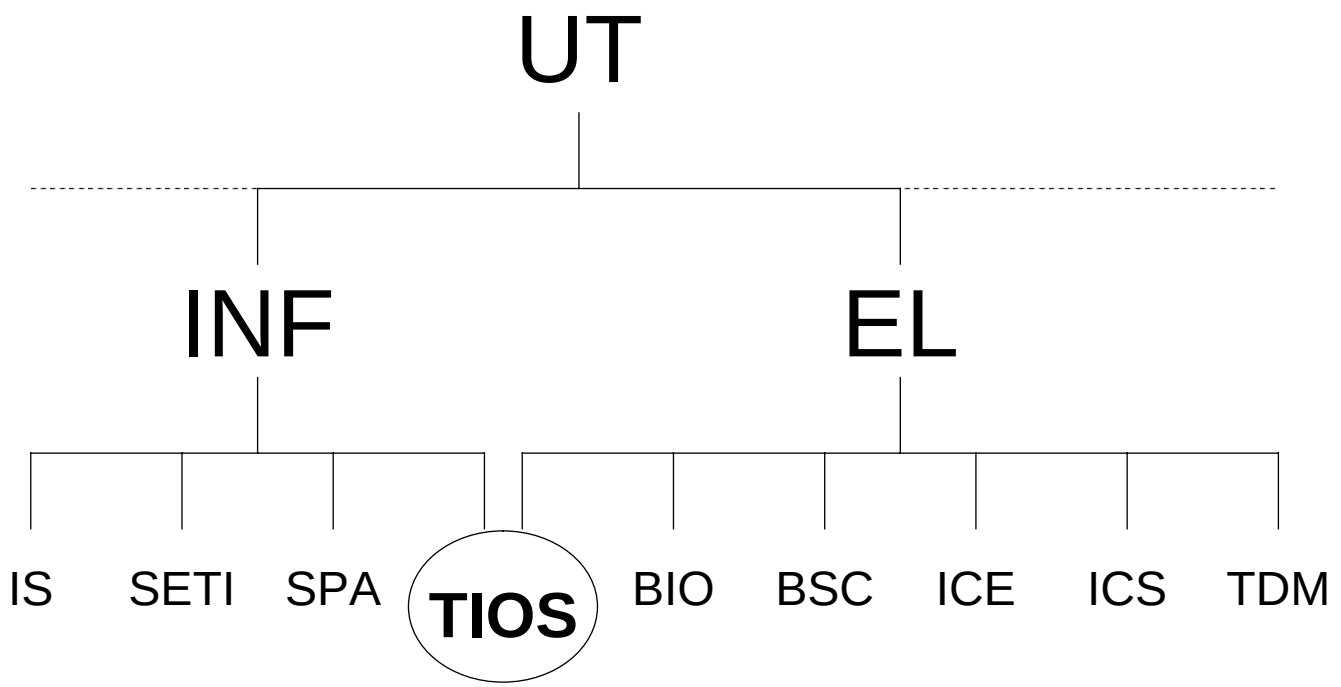
NETWORK MANAGEMENT ARCHITECTURES

Aiko Pras

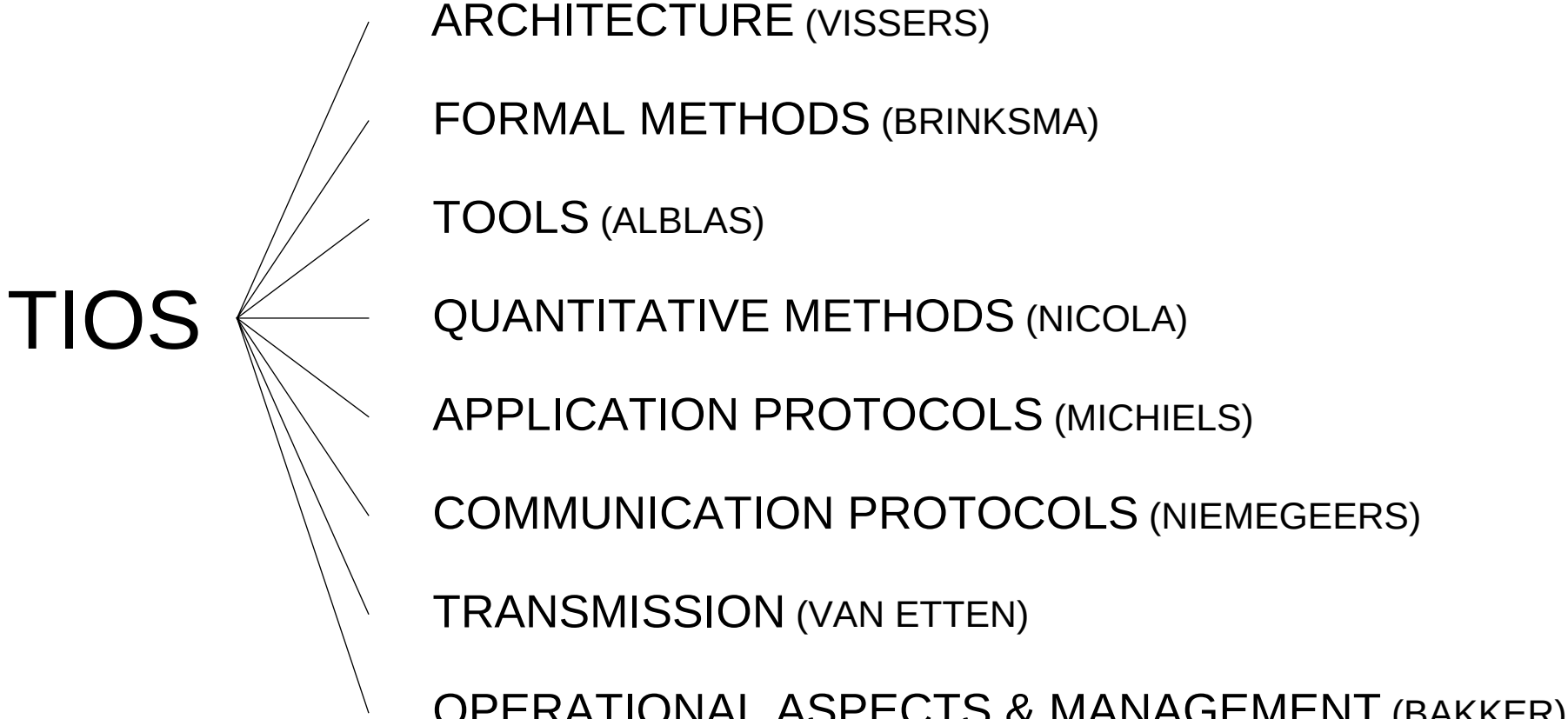
pras@cs.utwente.nl
http://wwwtios.cs.utwente.nl/~pras
http://wwwsnmp.cs.utwente/

PRESENTATION AT CAP-VOLMAC
11 September 1995

TIOS and the UT



ORGANIZATION TIOS



OPERATIONAL ASPECTS & MANAGEMENT

MEMBERS:

- KEES BAKKER (PART-TIME PROFESSOR)
- AIKO PRAS (RESEARCHER)
- ERIC VAN HENGSTUM (SOFTWARE ENGINEER)
- HARRIE HAZEWINKEL (PROJECT RESEARCHER)
- MANY STUDENTS

PROJECTS:

- UT-SNMPv2 (internal)
- ATM MANAGEMENT (SURFNET-4)
- WWW MANAGEMENT (EC)
- HIERARCHICAL MANAGEMENET (EC?)

SNMPv2 PROJECT

WHY SUCH PROJECT?

• GET PRACTICAL EXPERIENCE

• IMPROVE KNOWLEDGE OF PROTOCOL IMPLEMENTATION

• IMPROVE EXTERNAL CONTACTS

WHY SNMPv2?

•EASY PARTICIPATION

• MORE THAN PAPERWARE

RESULTS:

• RELEASE 4

• WORK HAS BECOME WELL-KNOWN WITHIN THE INTERNET COMMUNITY

NETWORK MANAGEMENT ARCHITECTURES

THESIS:

THERE IS NO PRINCIPLE DIFFERENCE

BETWEEN THE DESIGN OF PRIMARY FUNCTIONS

AND THE DESIGN OF MANAGEMENT FUNCTIONS

NETWORK MANAGEMENT ARCHITECTURES

IMPLICATION:

IT SHOULD BE POSSIBLE TO MODEL

BOTH KIND OF FUNCTIONS

AS PART OF A SINGLE ARCHITECTURE

NETWORK MANAGEMENT ARCHITECTURES

existing approach

architecture for primary network functions

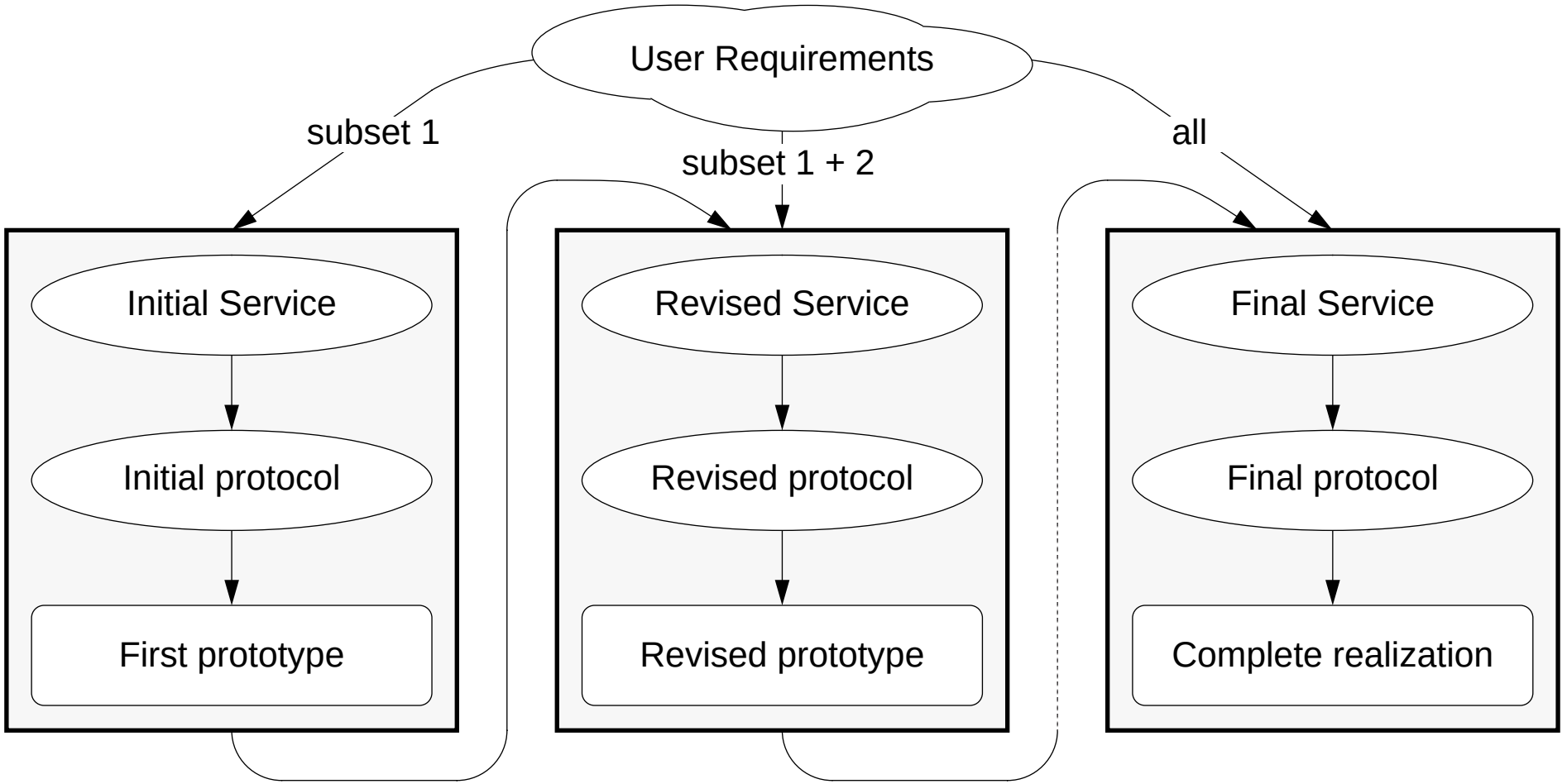
+

architecture for management functions

approach followed by my thesis

integrated architecture for primary & management functions

MANAGEMENT AS PART OF THE DESIGN PROCESS



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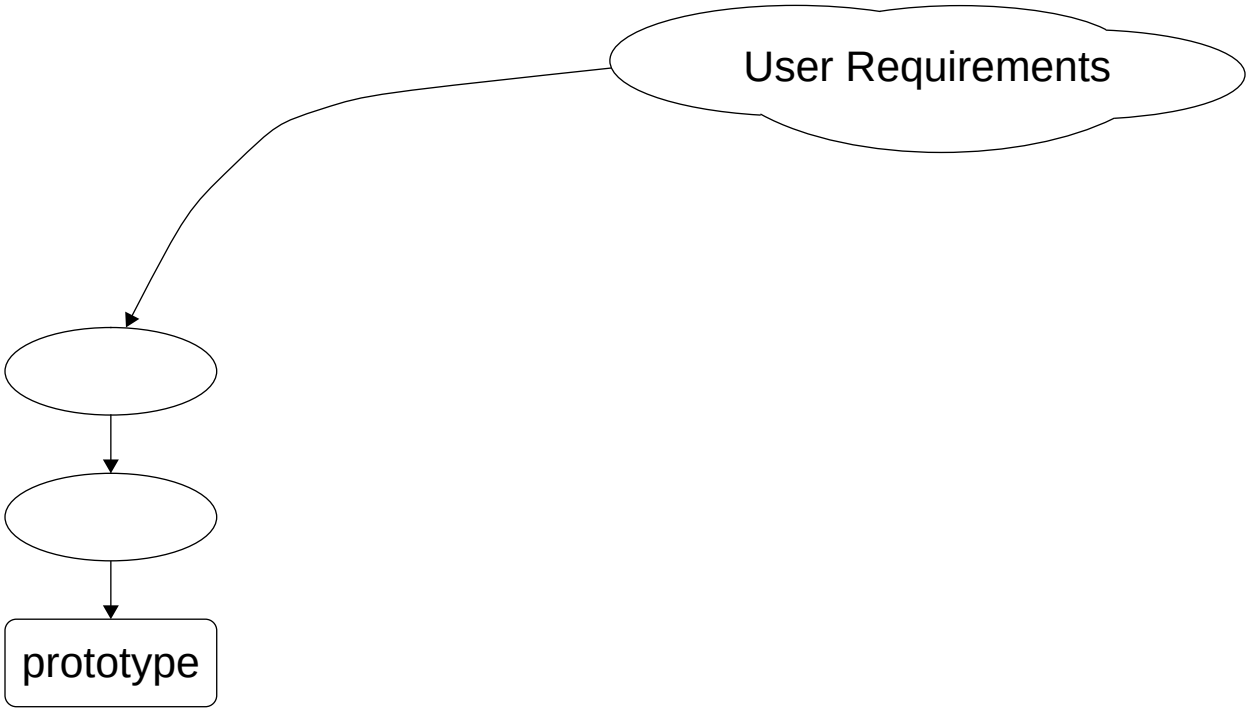

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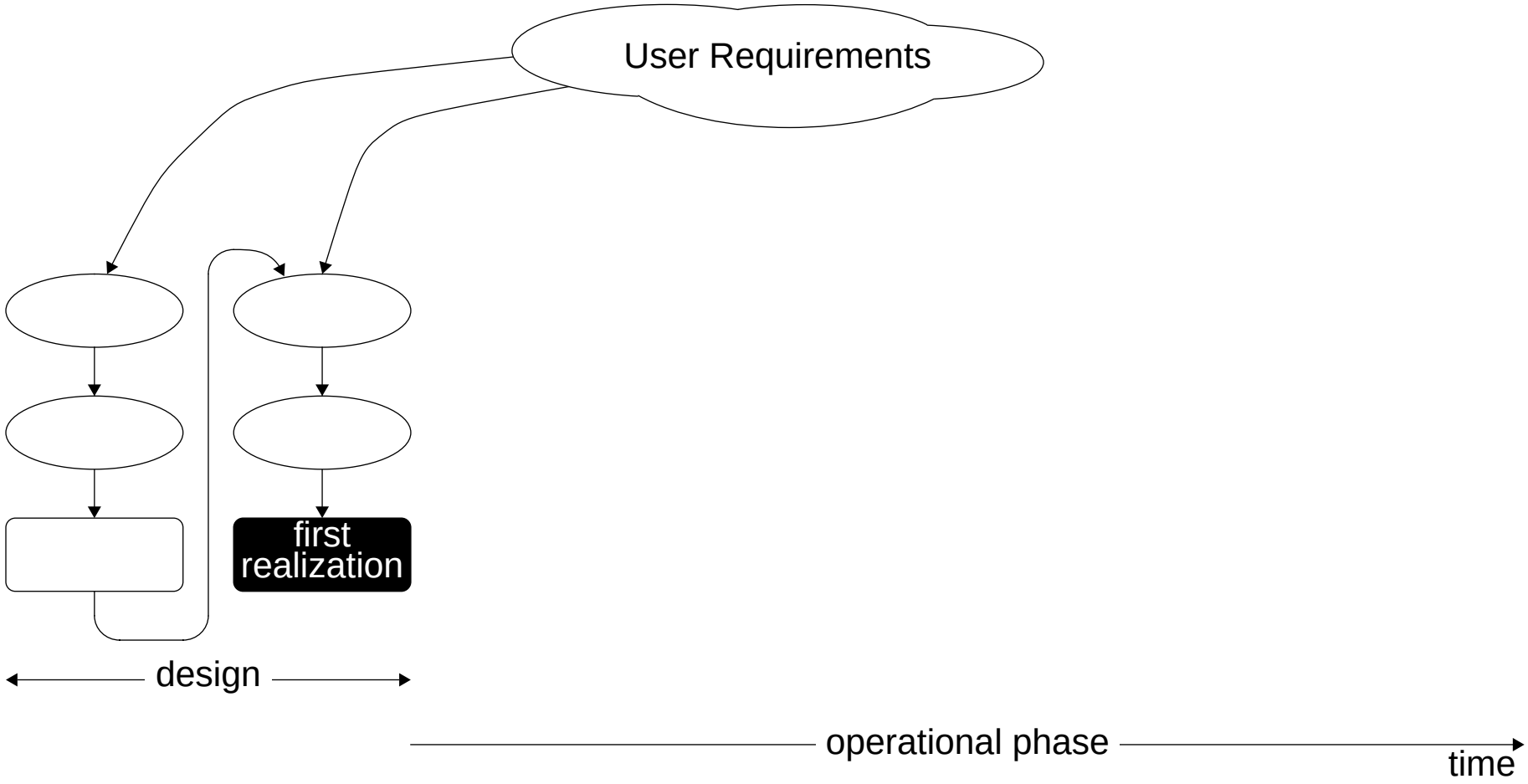

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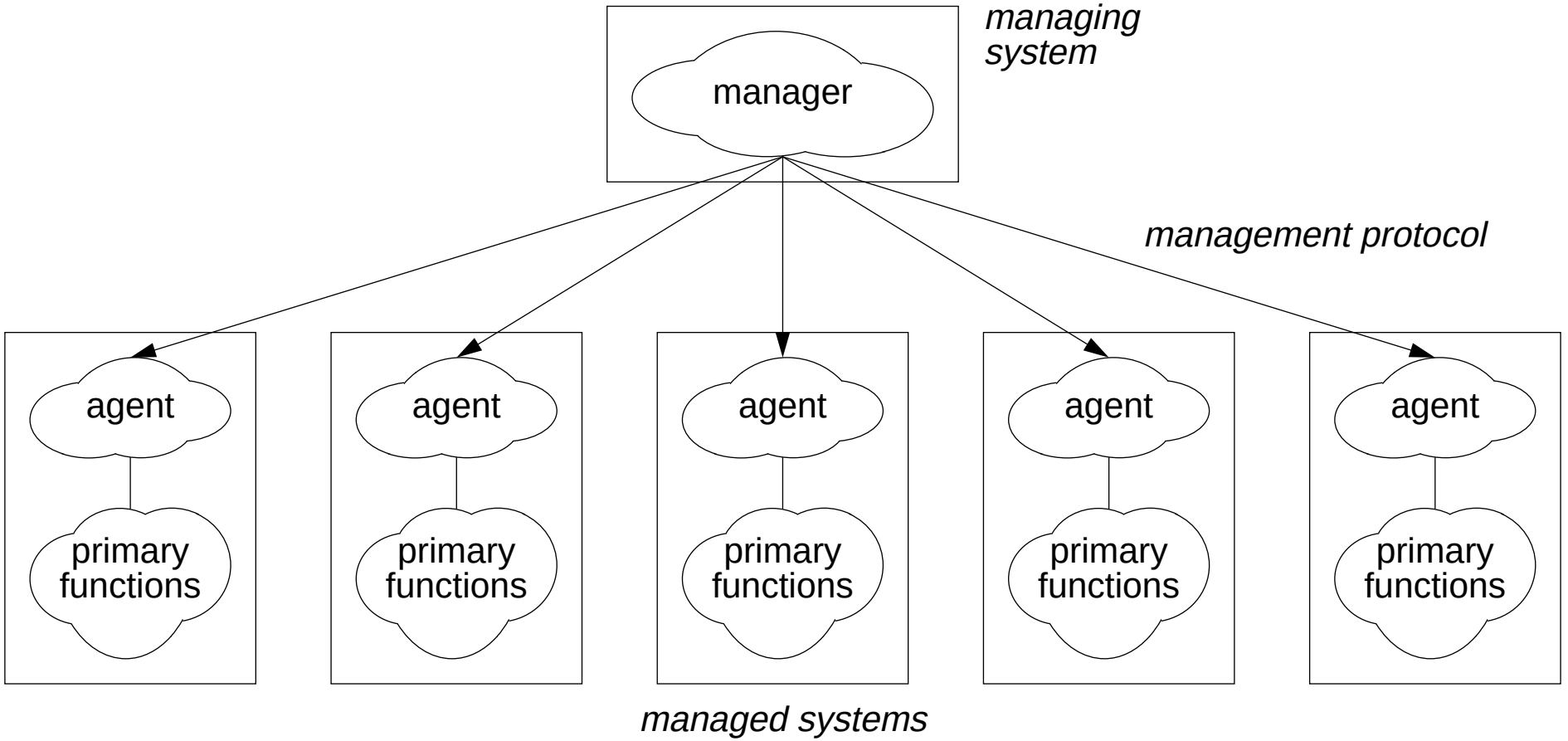

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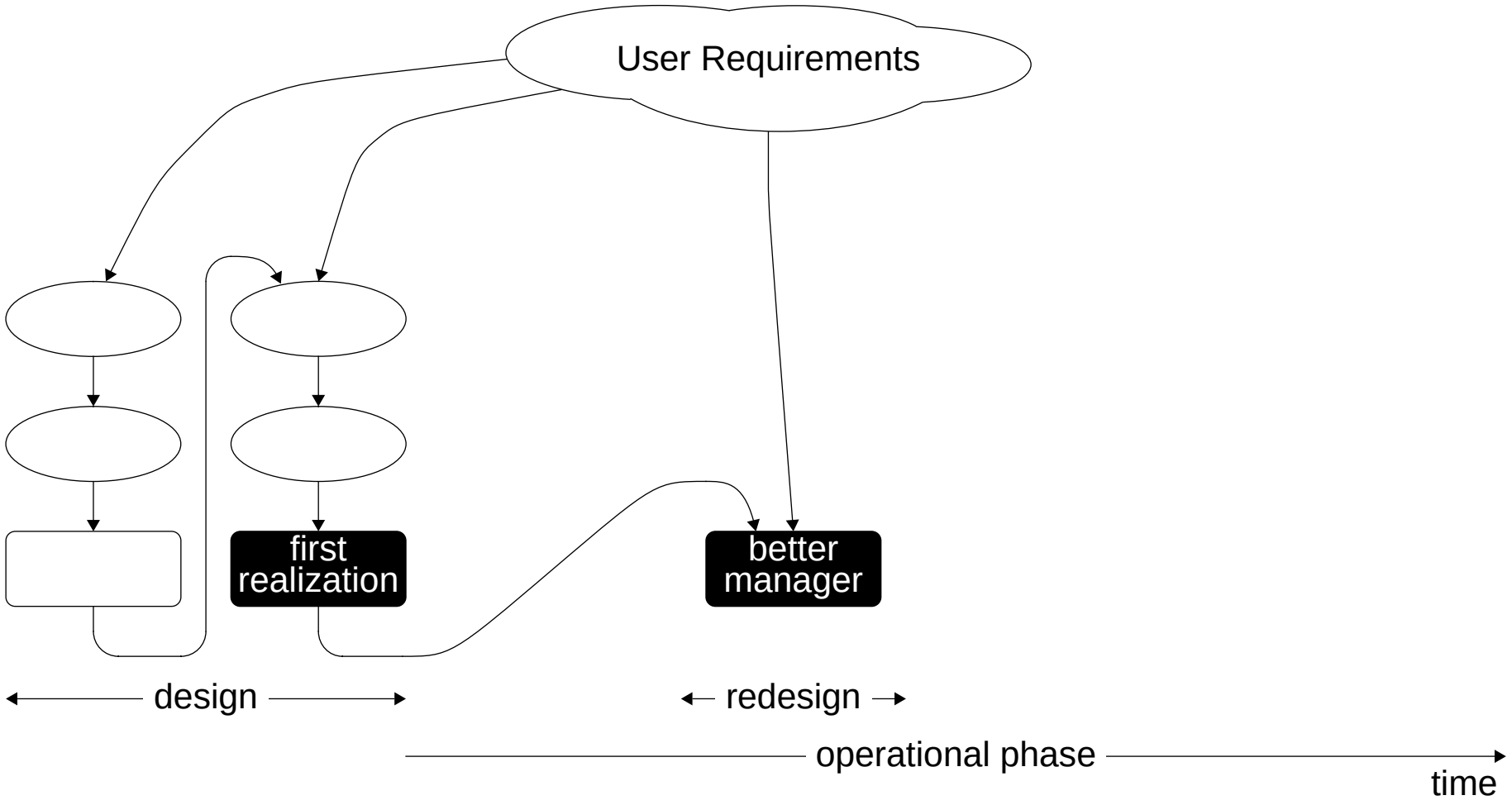

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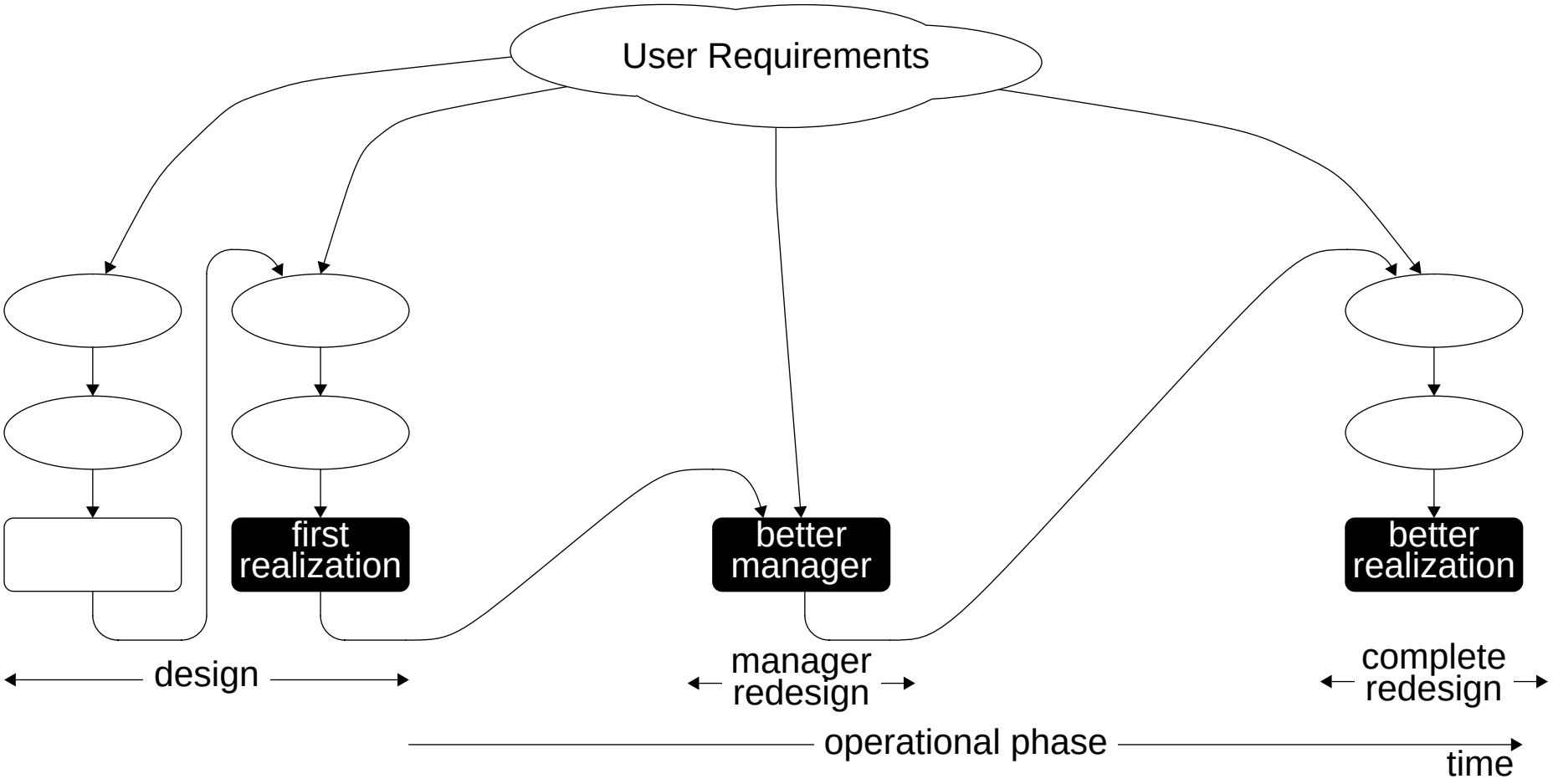

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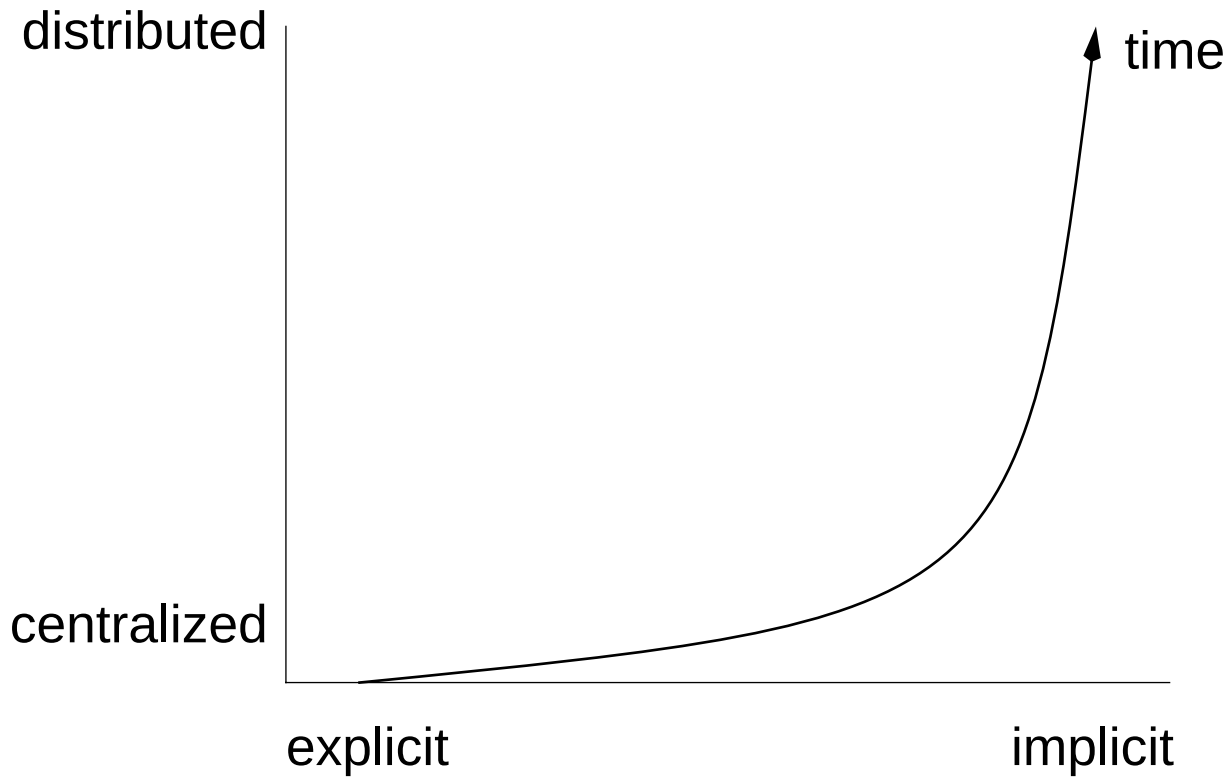

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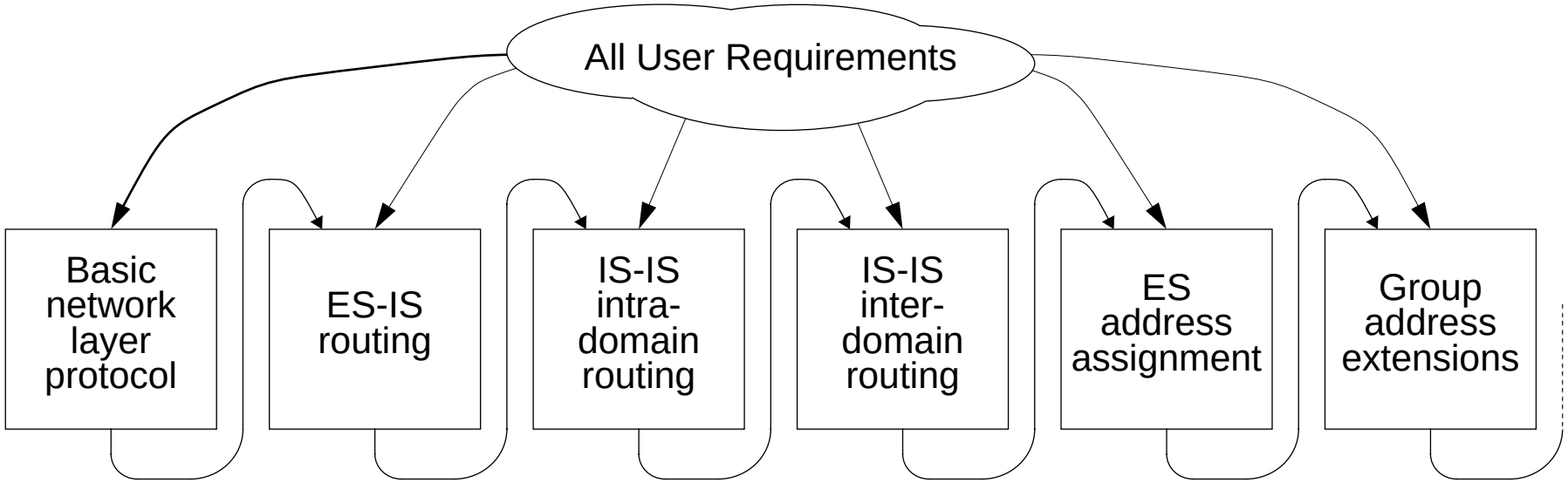

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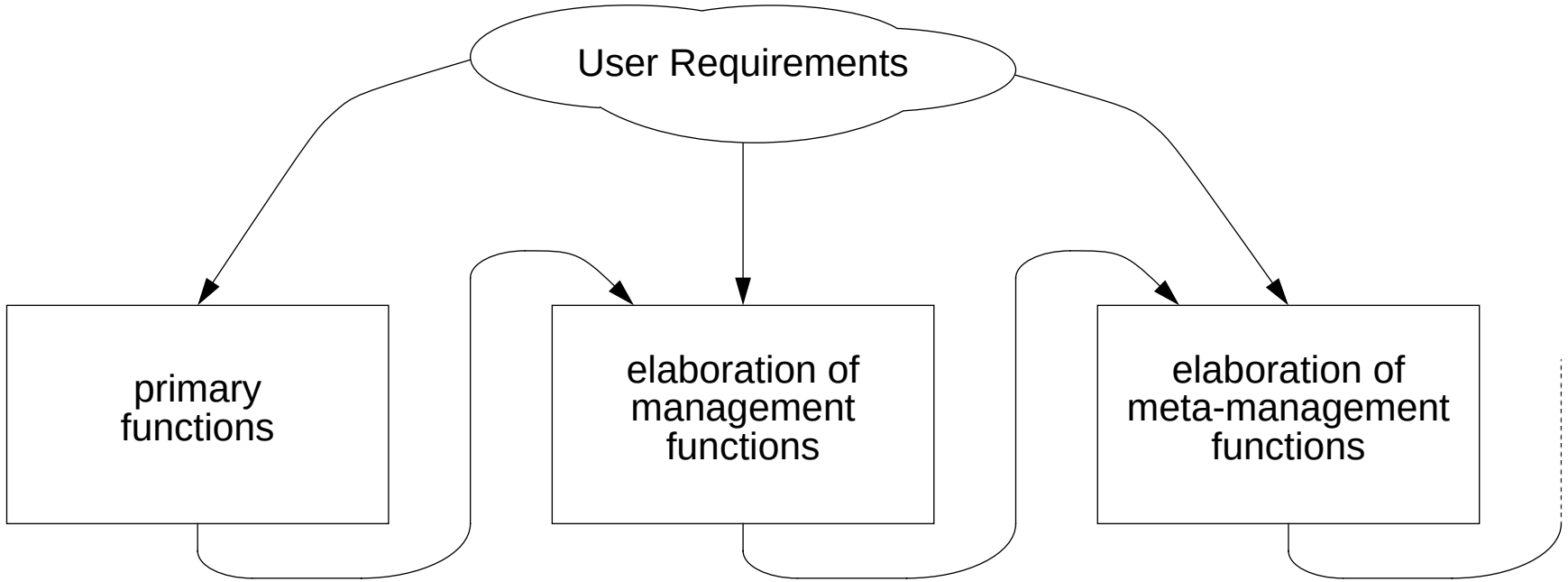

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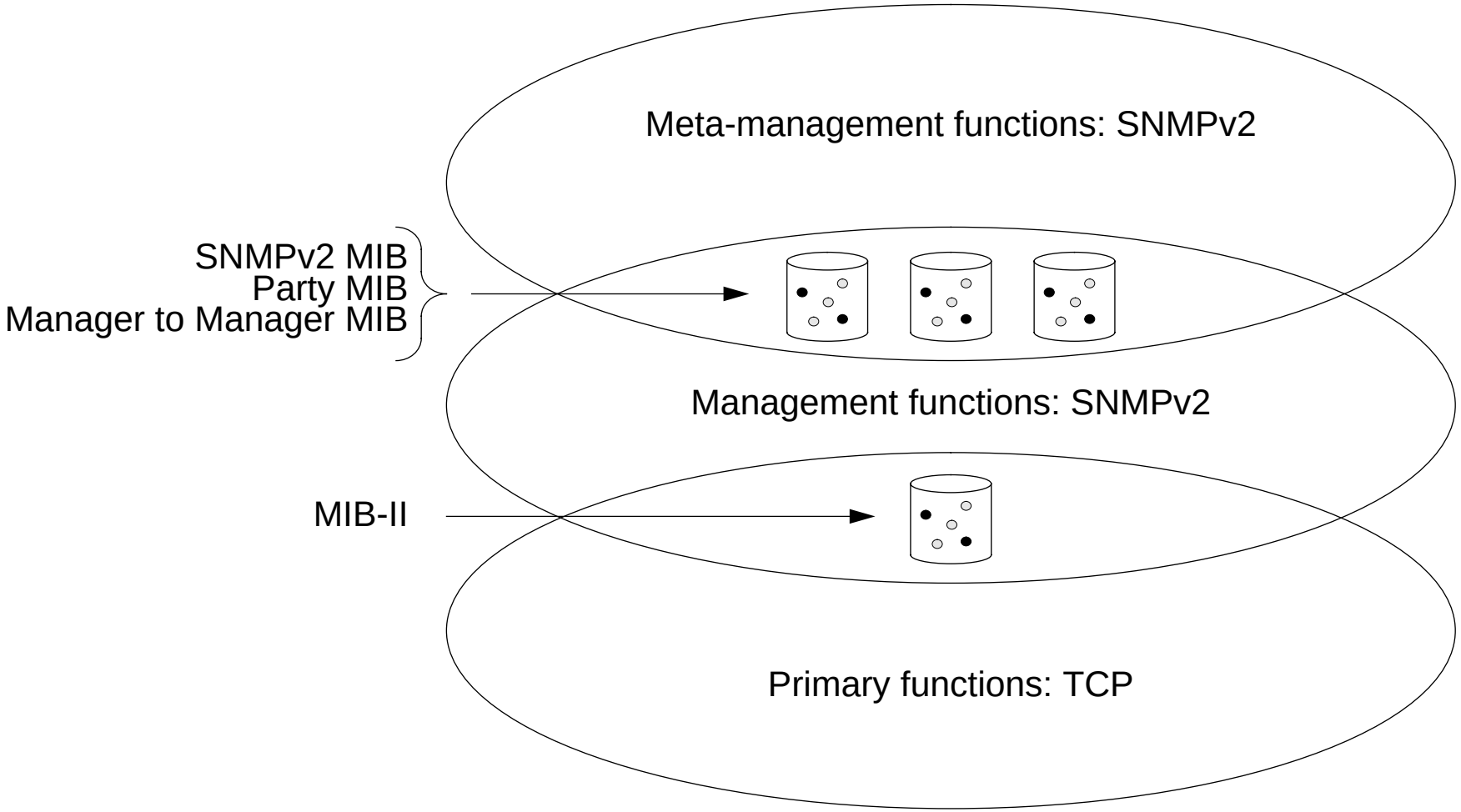
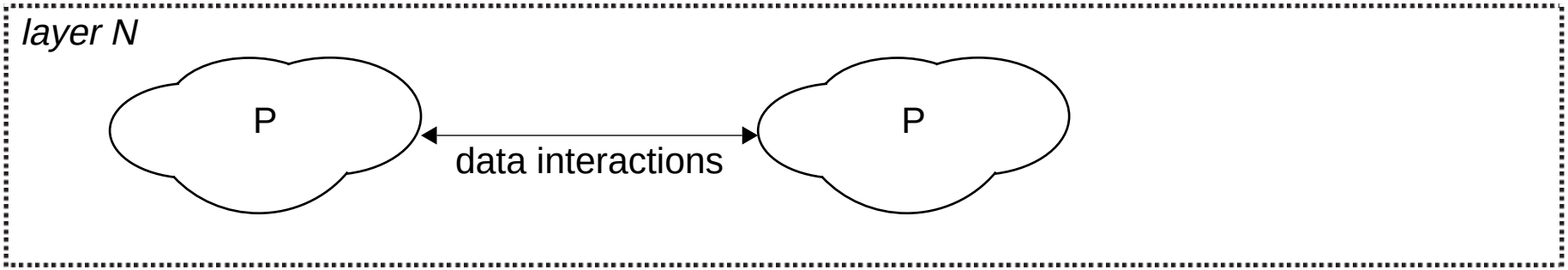


A PROTOCOL MANAGEMENT ARCHITECTURE



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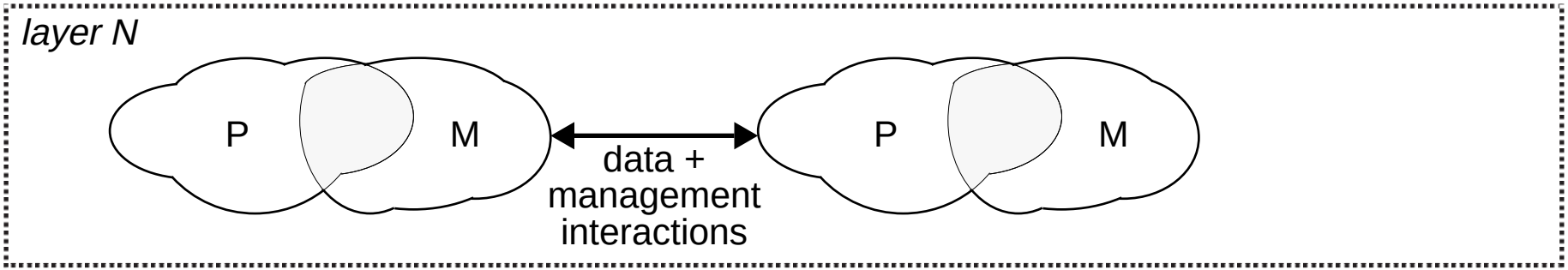

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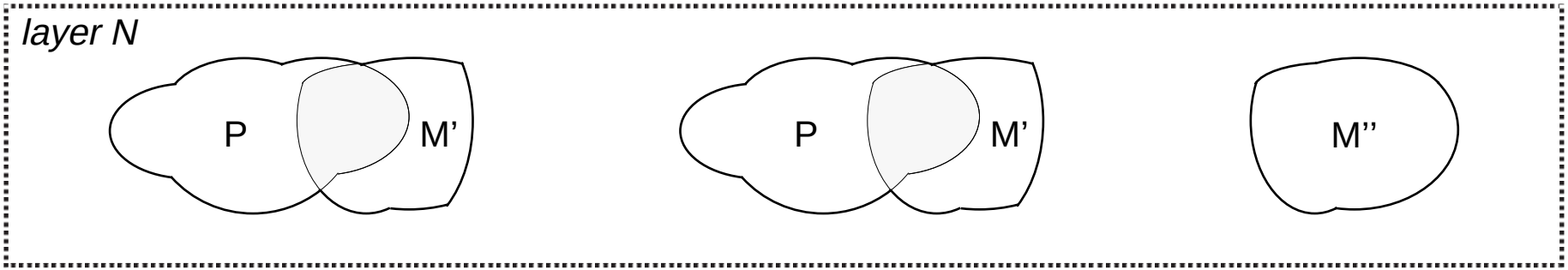

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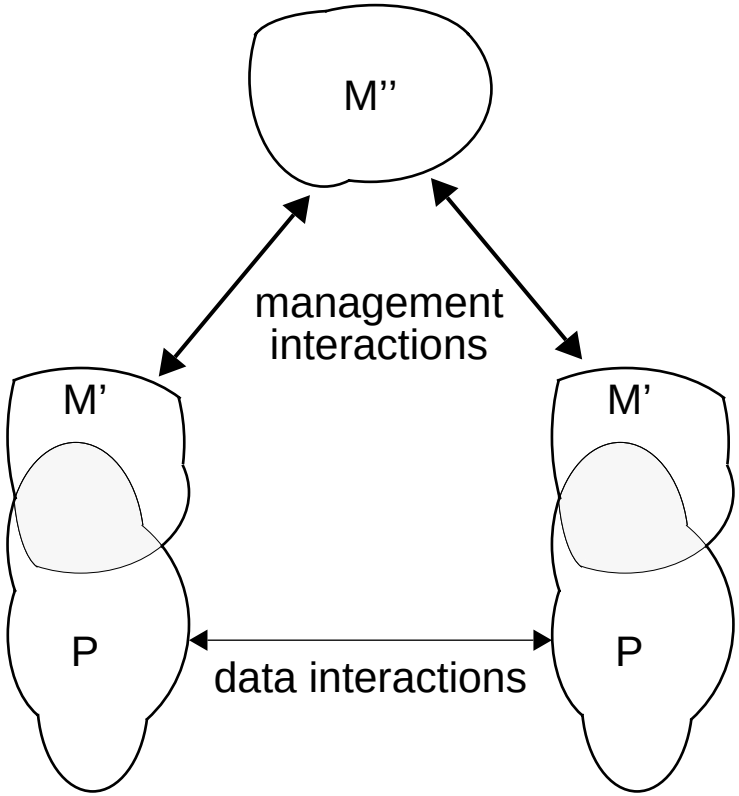

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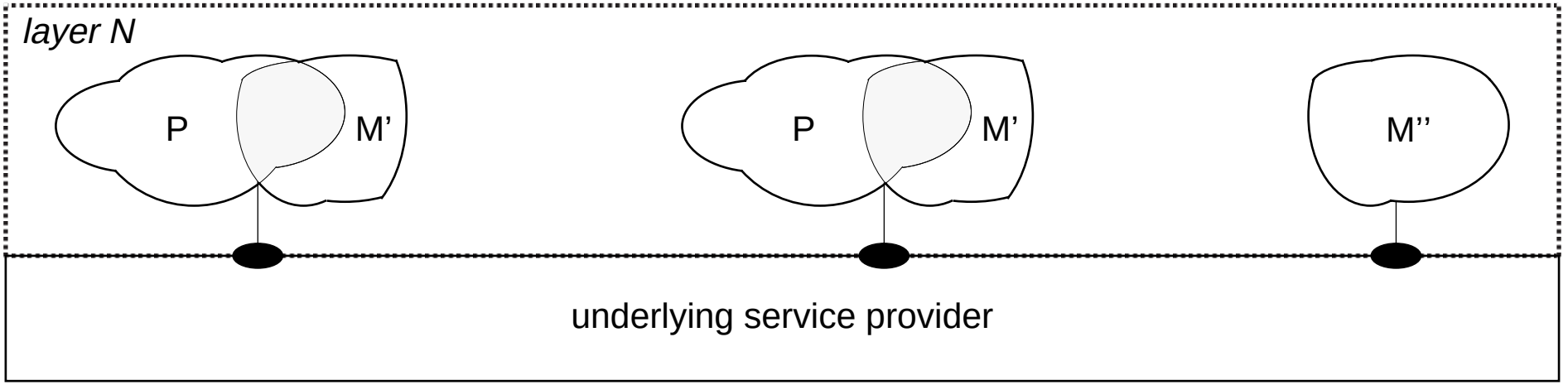

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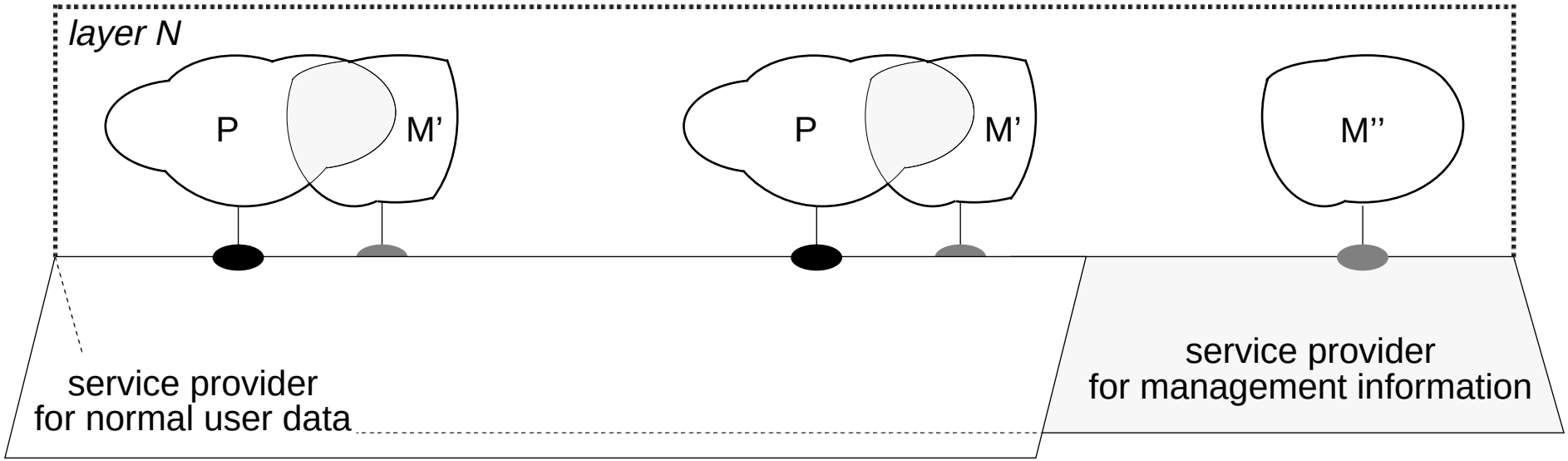
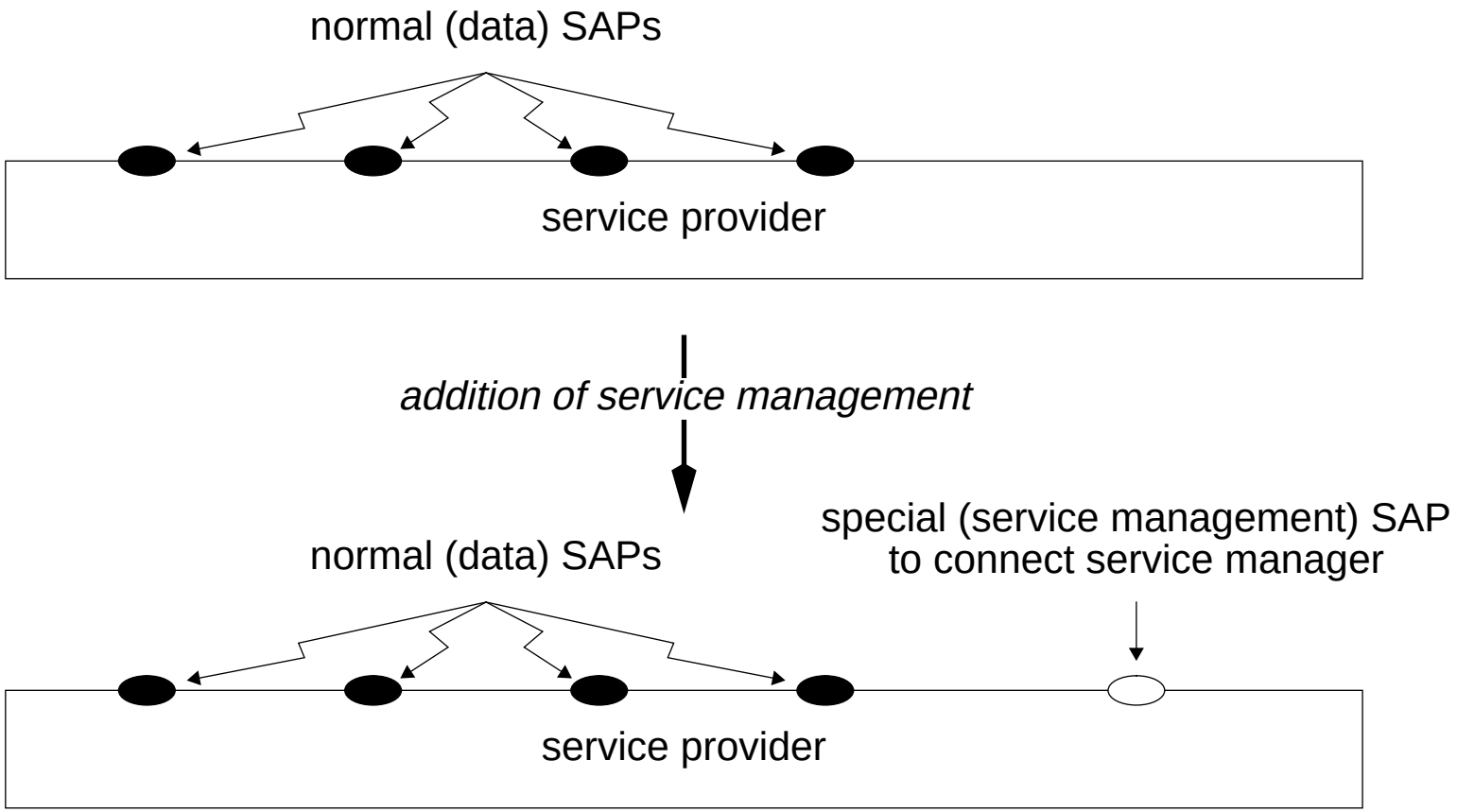
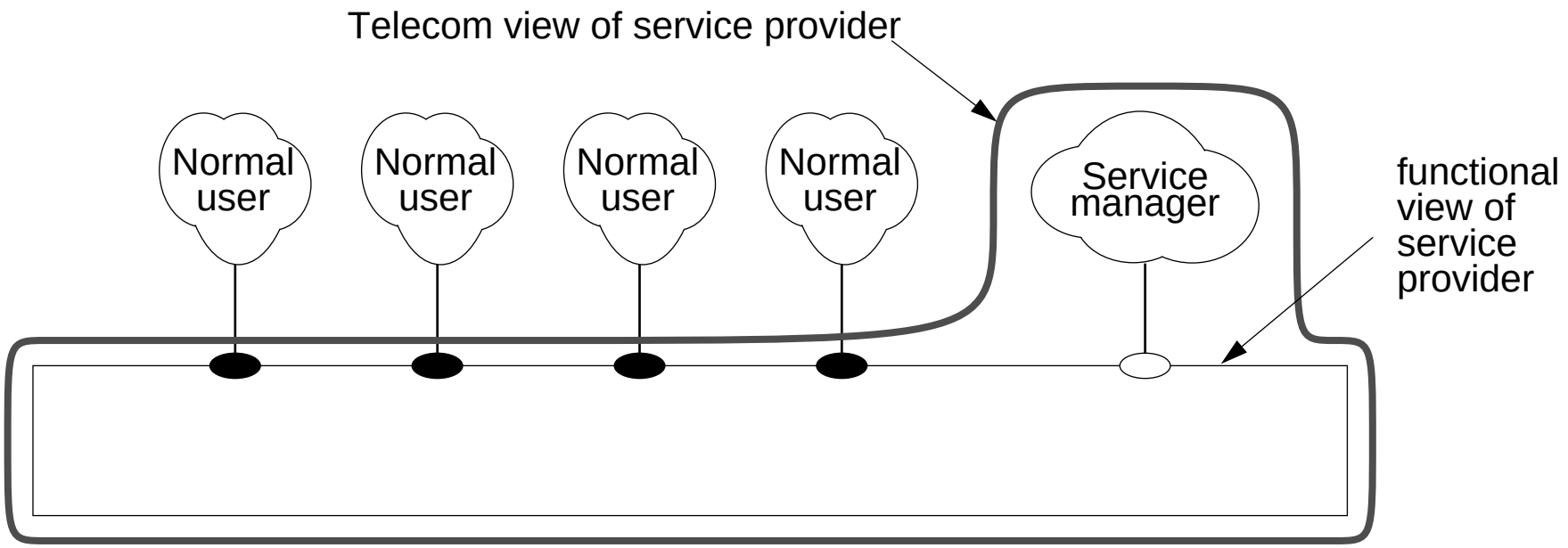


MULTIPLE MANAGEMENT ARCHITECTURES

- SERVICE MANAGEMENT
- PROTOCOL MANAGEMENT
- ELEMENT MANAGEMENT

SIMILAR IDEAS AS TMN
BETTER FORMALIZED

SERVICE MANAGEMENT ARCHITECTURE



SERVICE MANAGEMENT ARCHITECTURE