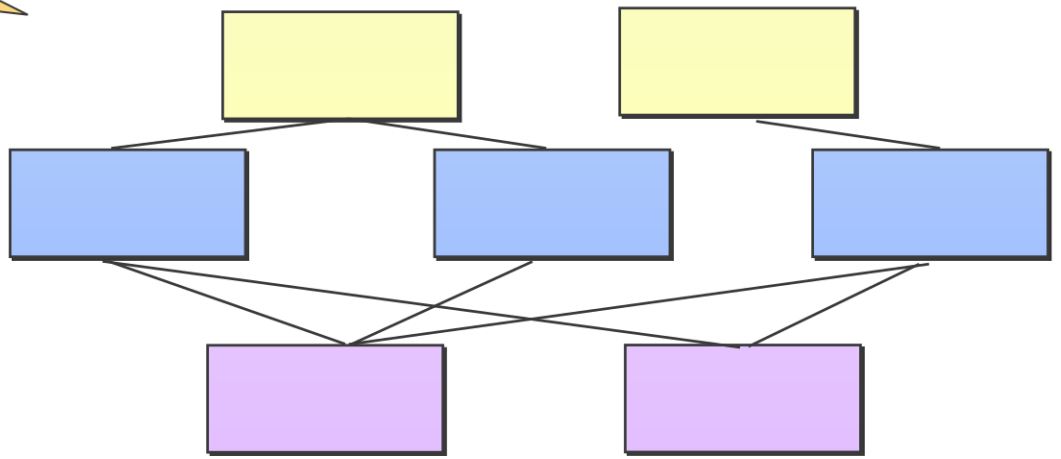
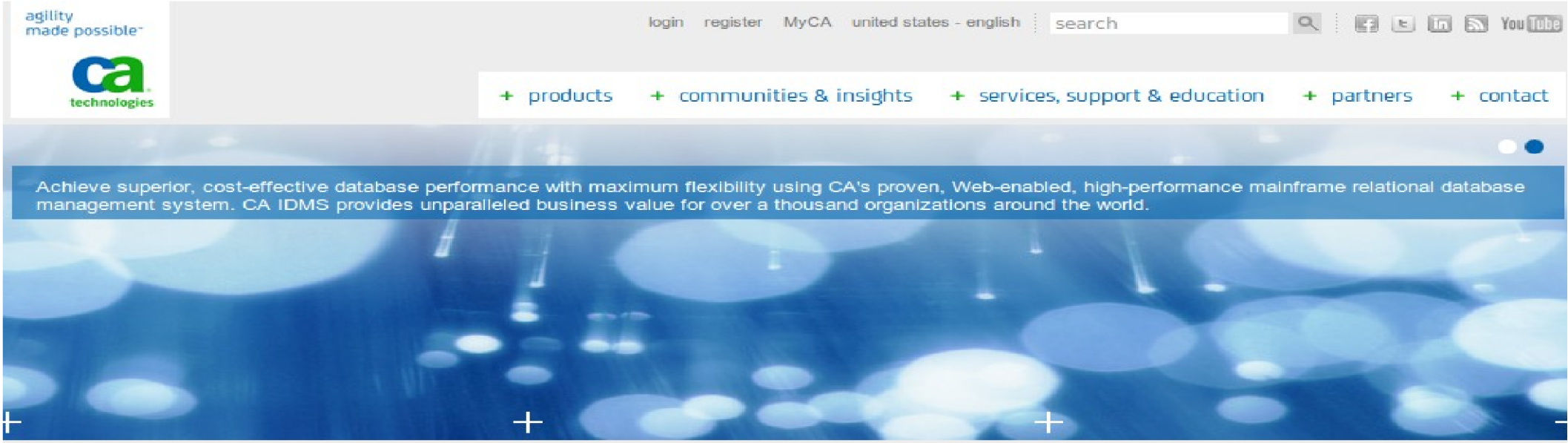
DBMS - Soorten

Netwerk



wim.bertels@ucll.be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- IDMS(2011)

DATA SHEET

CA IDMS™/DB

agility made possible™

ca technologies

At a Glance

CA IDMS™/DB Release 18.5 is a proven, reliable, high-performance, web-enabled DBMS for IBM System z that provides outstanding business value for hundreds of enterprises and government organizations around the world. A powerful database engine and the core of the CA IDMS™ product family, CA IDMS/DB exploits the latest hardware and software technologies, including the IBM zIIP specialty processor.

Key Benefits / Results

Reliable, modernized, cost-effective DBMS platform. CA IDMS/DB is designed to deliver rapid response time and 24/7 availability for critical applications and business services.

Cost-effective performance and throughput. CA IDMS/DB takes fewer system and human resources than other leading databases.

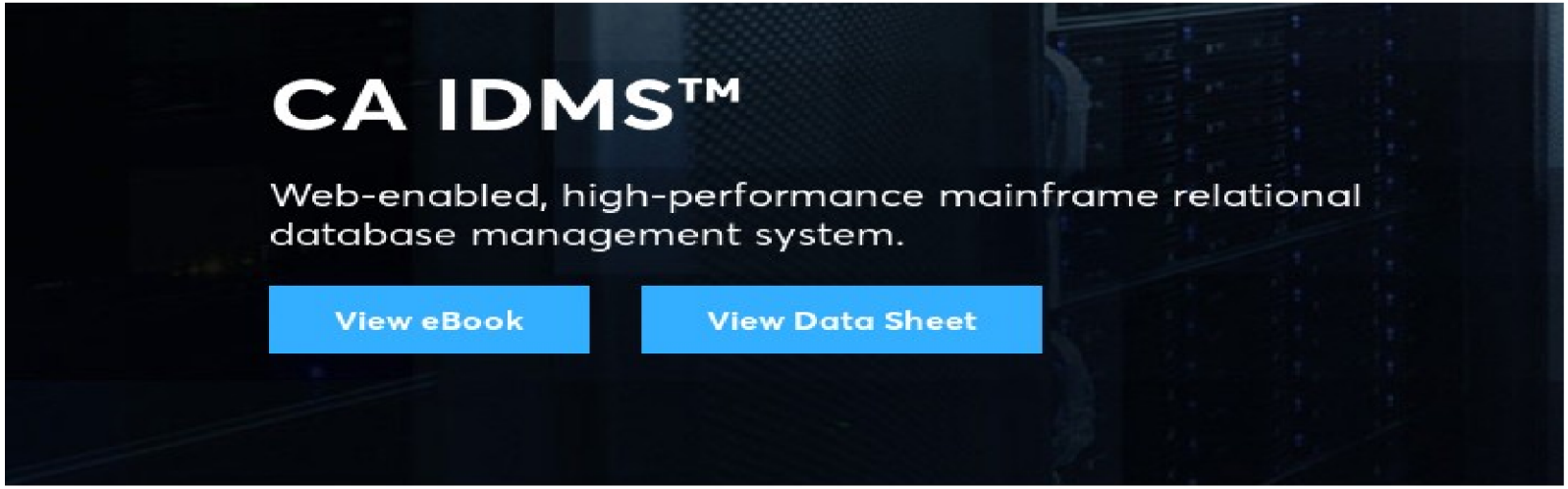
Modernization flexibility. CA IDMS/DB

Business Challenges

Provide high-performance, continuously available systems

Today, organizations must improve customer service through continuously available high-performance systems while enabling critical data access to customers and business partners 24/7 through a variety of server-based, web-based and mobile applications and services.

IDMS 18.5 (2013)



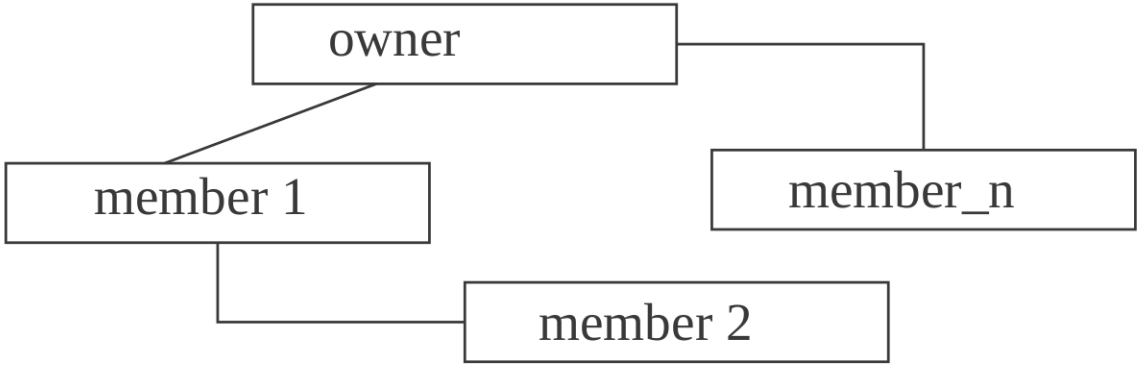
Web-enabled, high-performance mainframe relational database management system.

Achieve superior, cost-effective database performance with maximum flexibility using CA's proven, Web-enabled, high-performance mainframe relational database management system. This legacy DBMS provides unparalleled business value for global organizations, including Fortune 1000 businesses spanning financial, healthcare, manufacturing and more.

IBMS (2017)

Bouwstenen

- Recordtypes => recordinstantiatie
- Settypes => setinstantiatie
- Record key
- 1:n verband
  - Owner-recordtype
  - Member-recordtype



ER-model naar netwerkmodel

- n-op-m relatie naar 1-op-n relatie
- Omzettingsregels :
  - ✓ Entiteittype wordt recordtype
  - ✓ Binair 1:1 verband kan settype worden
  - ✓ Binair 1:n verband wordt settype
  - ✓ Binair n:m verband : nieuw recordtype creëren
  - ✓ Unair verband : nieuw recordtype

Terminologie

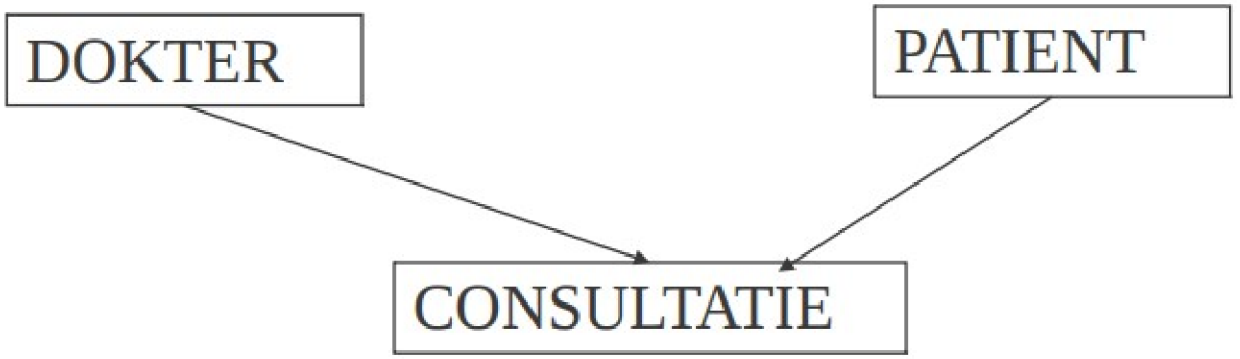
- Recordtype
- Settype
- Record key

Verschil hiërarchisch - netwerk

- Bij netwerkgegevensbanksystemen :
  - kan een recordtype member zijn in meerdere settypes
  - kunnen meerdere settypes bestaan tussen dezelfde recordtypes
  - kunnen members bestaan zonder owners

Gegevensbanktalen

- Gegevensdefinitietaal : DDL
- Gegevensmanipulatietaal : DML



Vergelijking met relationele structuur

wim.bertels@ucll.be

Hiërarchische structuren in een relationeel model

- Kan dit?
- Conceptueel

Vormen

- Rechtstreeks omzetting (cf IMS)
- Nested sets (niet kennen)
- Bomen
- (xml ea)
- ...

Netwerk structuren in een relationeel model?

Abstract : deelverzamelingen

Hierarchisch < Netwerk < Relationeel

Terminologie

- Relationeel (databank) :
  tabellen, rijen, kolommen
- Netwerk (schema):
  recordtypes (+settypes), records, fields
- Hierarchisch (database description):
  segmenten, records, fields
  - * Sequentieel

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- Links:
- http://www.postgresql.org/docs/current/static/datatype-xml.html
- http://www.postgresql.org/docs/current/static/ltree.html