Soil

a fresh look on object oriented databases

Norbert Hartl, Marcus Denker, ESUG 2023

Soil - the sequel of last year's talk
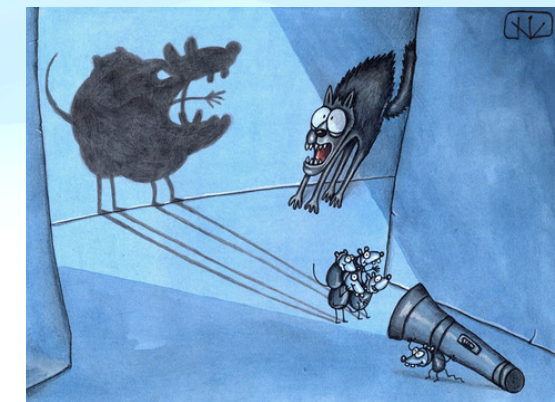
There's no magic...
... until you talk about databases

Norbert Hartl ESUG 2022

Soil
What it needs to be an OO database?

- ACID transaction (with MVCC)

- Regional file locking (row-level locking)

- serialization/materialization

- A b-tree implementation for indexing

- 100% smalltalk

Database

The acceptance of failure in developing cheap _and_ fast non-volatile memory

"You don't want to send your data to a program. What you want is to send a little program to your data."

D. Henrichs , ESUG 2016 Prague

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"Norbert,
Before you go off and invent a data base , you might take a look at GemStone
and RemoteServiceReplication[1] ..."
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D. Henrichs on pharo-dev mailing list Aug. 2022

How people think a database should be

How I think a database should be

What it is right now

- 3 packages

  - Soil-File

  - Soil-Serializer

  - Soil-Core

- 99 classes

- 6064 lines of code

What it can do now

- ACID transactions (almost)

- MVCC (multi version concurrency control)

- Binary search indexes (skip list, BTree)

- Journal based committing

demo time

What it should do later

- standalone serializer

- multi-index collections

- geo-, fulltext-, *younameit*-index

- query planning