Soil and Pharo

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Sources/Changes

- Every compiled method has a pointer to `.sources/.changes`
- Stored in the last 5 bytecodes
- Every entry is an offset in the files
Need: Not in Image

- .sources is 40MB
- Would be a large chunk of the image
  - (But: Perm Space changes the picture)
Need: History

- Having a per-accept history is nice
  - Does not depend on commits to git
Need: Transaction Log

- Pharo crashes and you have to saves the image or stored the code in git
- All accepted methods / class comments / class definitions are in the .changes
- Replay is possible
Current problems

• Can not be shared by images, but can not be locked either

• Not thread safe

• Very simple caching

• SLOW!
Soil

- Has transaction log
- Supports accessing old versions
- We could just store a Soil Object Pointer per CompiledMethod
- Thread safe
Epicea

- Higher level Code Change model
- Stored in text files
- Slow!
Indexing

- We do not use indexing
  - Senders
  - Implementors
- Full text search
Resources

- We store some data as Base64 Encoded strings
- Even as method comments (!!)
  - abuse the .sources/changes am object store…
Why not …?

• store the whole history of the code?
  • e.g. find deprecation transforming methods

• store at the AST granularity?
Demos next ESUG!