



MetaCase

# **Collaborative modelling and metamodelling with MetaEdit+**

HoWCoM, 11 October 2021

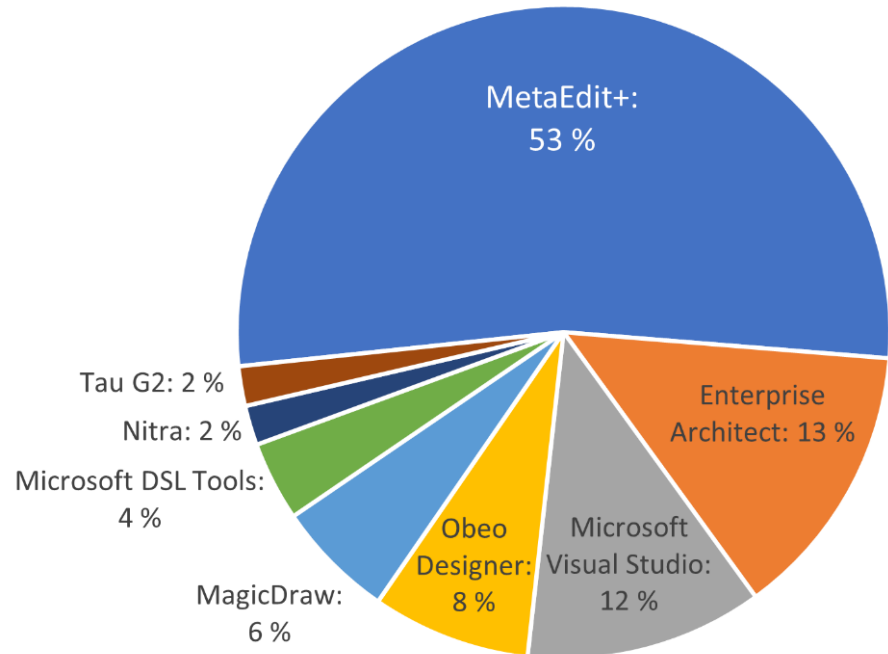
Steven Kelly, MetaCase

# MetaEdit+ in a nutshell

- Graphical modelling and metamodelling tool
- Single user and multi-user
- Diagram Editor, Matrix Editor, Table Editor, Browsers
- Metamodelling tools, graphical Symbol Editor, Generator Editor + Debugger
- Domain-Specific Modelling for full code generation
- Mature tool, 100s of DSLs, 1000s of commercial users
  - University 1992, Product 1995, Latest release 2021: Cloud RSL

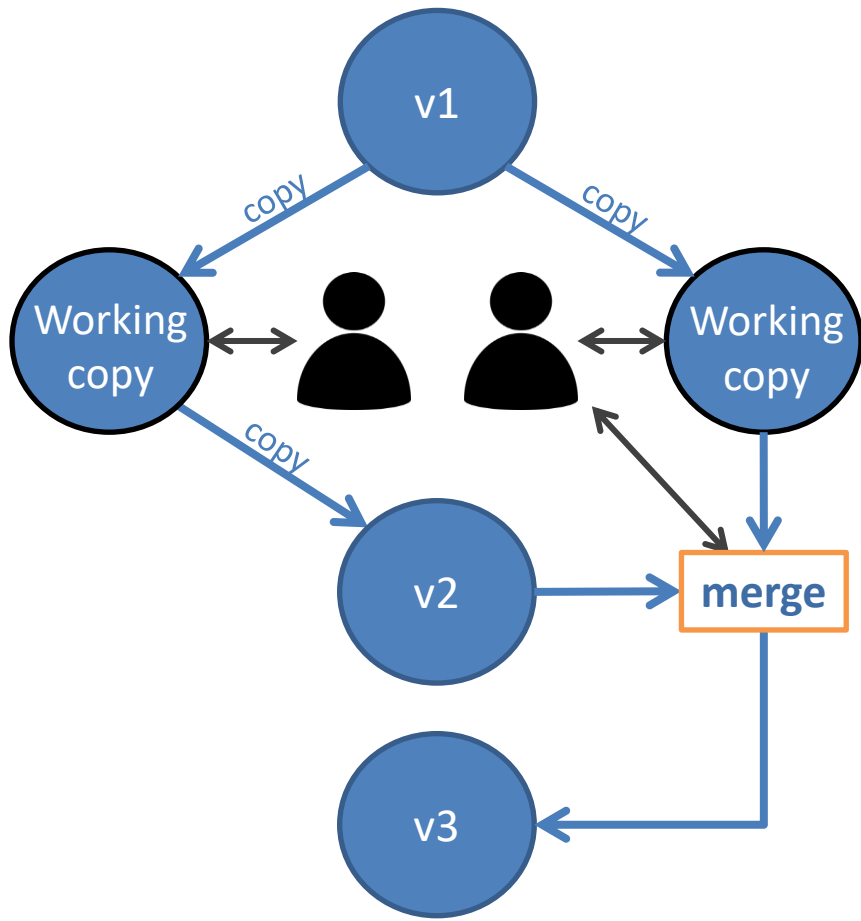
## Reported use of commercial DS(M)L tools, 2012–2020

*Systematic mapping study on domain-specific language development tools,  
lung et al., Empirical Software Engineering 25(1), 2020*



# Clone

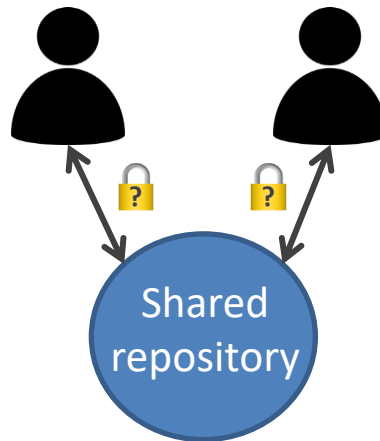
*merge after the fact*



vs.

# Share

*continuous integration*



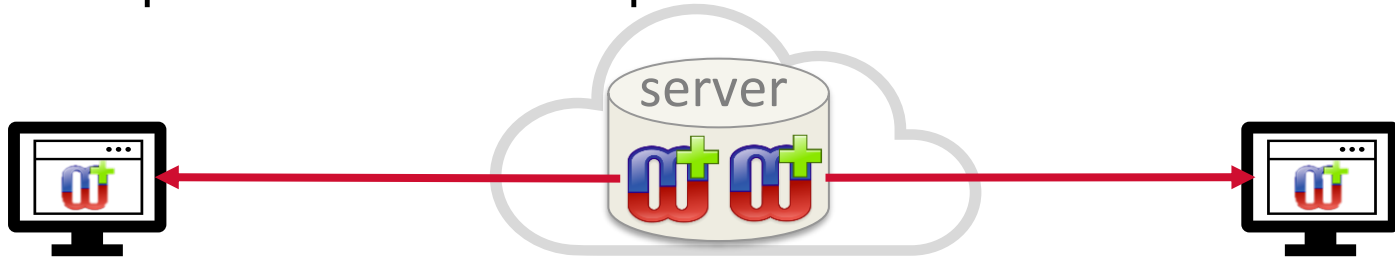
# Collaboration in MetaEdit+



- Repository-based: users work in parallel on same data
  - No need to merge
  - Models and metamodels can be edited simultaneously
- Locks ensure no conflicts
  - Fine granularity, so can work closely without lockout
- Low ceremony: locking and unlocking is automatic
  - Users can focus on work, not tool
- Design transactions: minutes to hours
  - Commit a coherent set of changes together
    - Releasing half-finished/inconsistent data would confuse others
  - See a consistent version of repository during transaction
    - Avoid being distracted by others' changes appearing live

# RSL: Remote Shared License

- IT departments want to avoid installing software
- Want to allow users to work from anywhere
- Graphical modelling has high performance reqs at client
- Large repositories are slow to move over a network
  - Particularly with high latency over VPNs + load as needed
- Put MetaEdit+ server and client on one Windows Server
- Multiple remote desktop connections from users



# Conclusion

- Work with multi-user repository and latest coherent data
  - No merges, no lock-outs
  - No half-finished changes
  - No distractions
  - Found to work well for teams in industry
- Installation and architecture to match organisation needs:
  1. Native installations on organisation computers
  2. Remote desktop connection to organisation client computer
  3. Installation to Remote Desktop Server, own or in cloud
  4. Connect to RDS via browser or native RD app
  5. Open MetaEdit+ as RemoteApp on local desktop



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**Thank you!**