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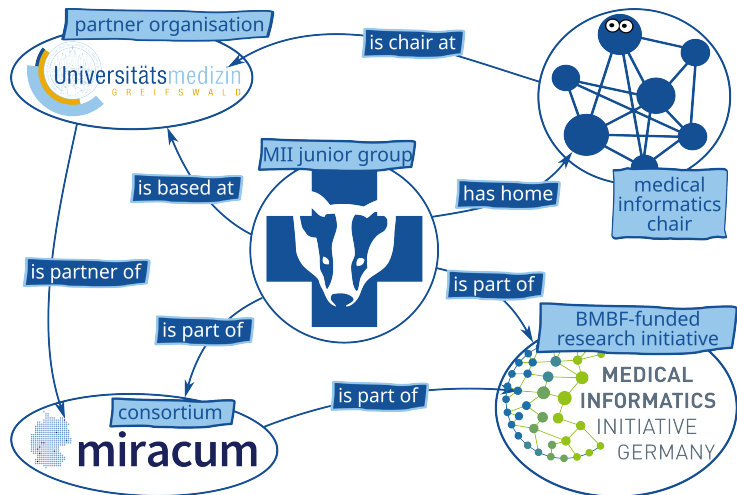
MeDaX – 1 year of bioMedical Data eXploration

Tom Gebhardt, Ron Henkel, Ilya Mazein, Lea Michaelis,
Dagmar Waltemath, Judith A.H. Wodke

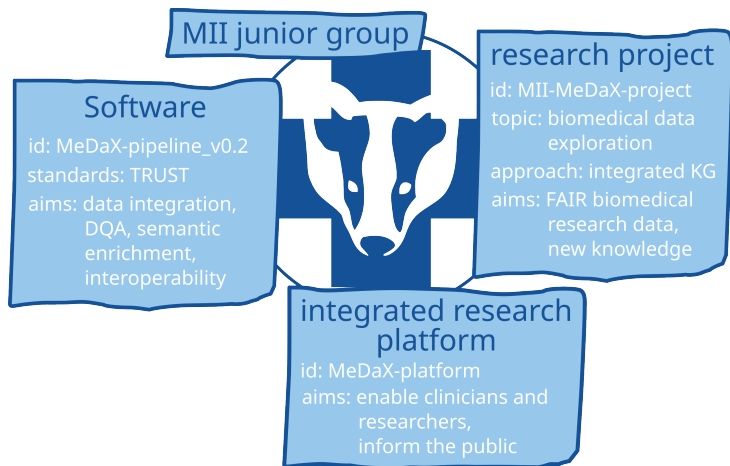
9th of October, 2023



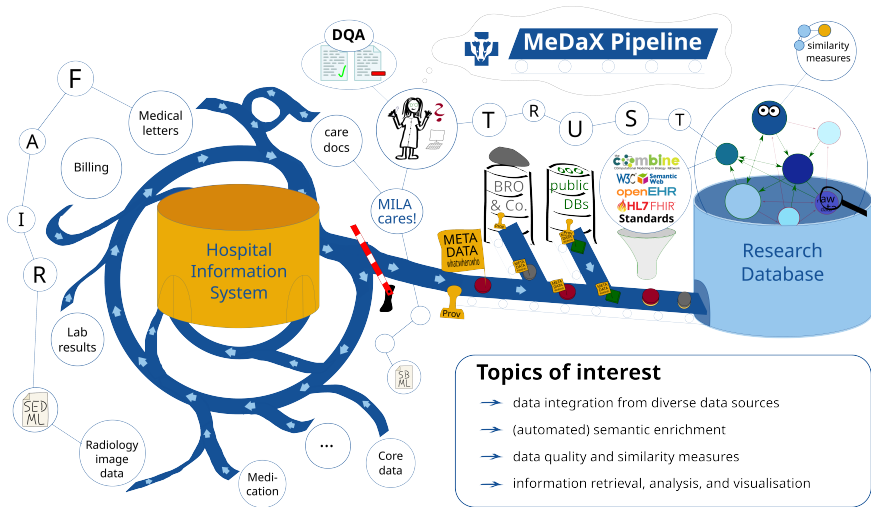
Who is MeDaX?



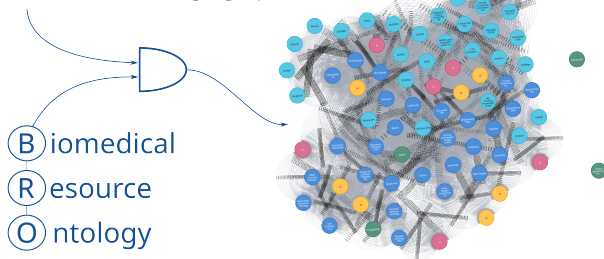
What is MeDaX?



The plan



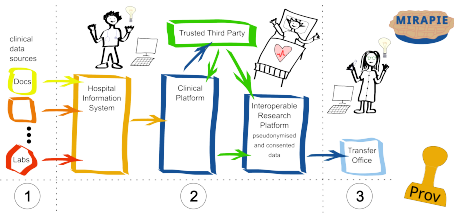

Community engagement: BioCypher + BRO



- BC repo: <https://github.com/biocypher/biocypher>
- BRO repo: <https://github.com/biocypher/biomedical-resource-ontology>
- meta-graph repo: <https://github.com/biocypher/meta-graph>



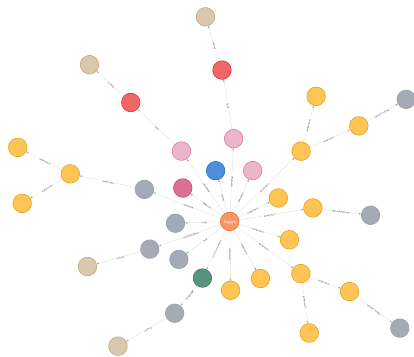
Minimal Requirements for Automated Provenance Information Enrichment



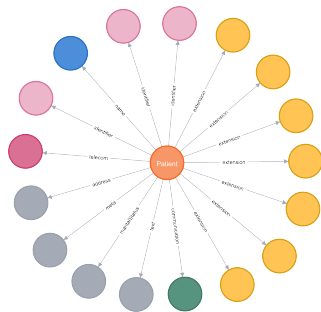
- Public repository: <https://codeberg.org/MIRAPIE/MIRAPIE>
- Public announcement at Provenance Week 2023 (ACM Web Conference)
- **joined MII TF Metadaten - Team Provenance**
- cooperate with Swiss Personalized Health Network (SPHN)

The MeDaX-KG v0.2 (prototype)

Aim: FHIR formatted research data is integrated with ontological information and enriched by provenance meta-data



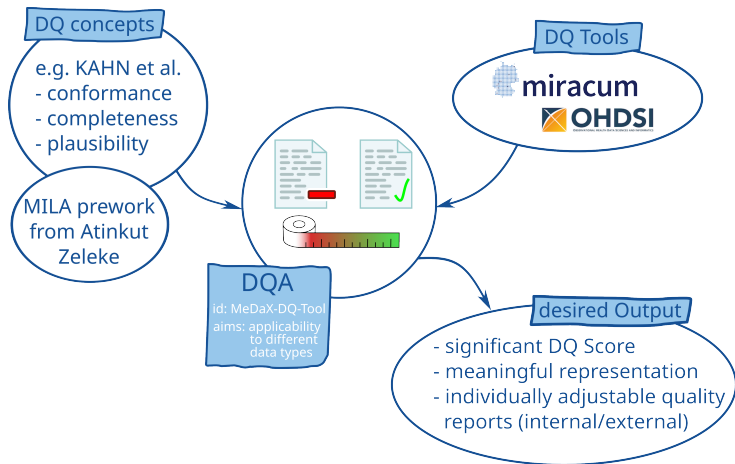
CyFHIR tool: FHIR → Neo4j



path condensation



Cooperation with UMG-DIZ: Data quality (DQ) measures



- **joined MII TF Metadaten - Team Data Quality**



Summary: What is MeDaX?

The MeDaX project is all about knowledge and graphs



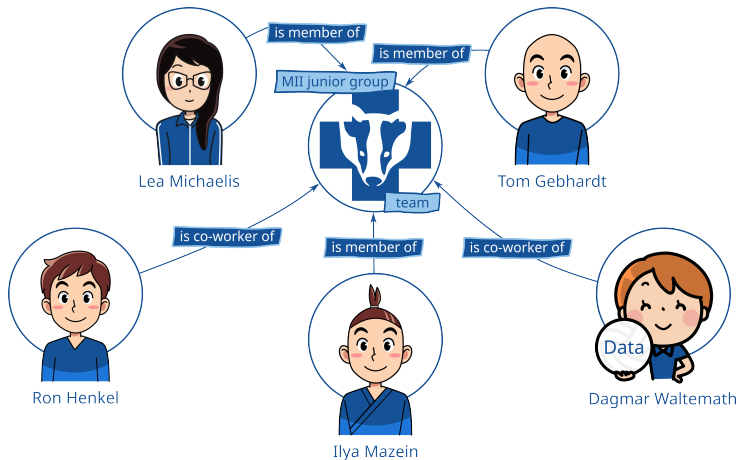
i.e. about integrated biomedical knowledge graphs



and about creating new knowledge using graphs



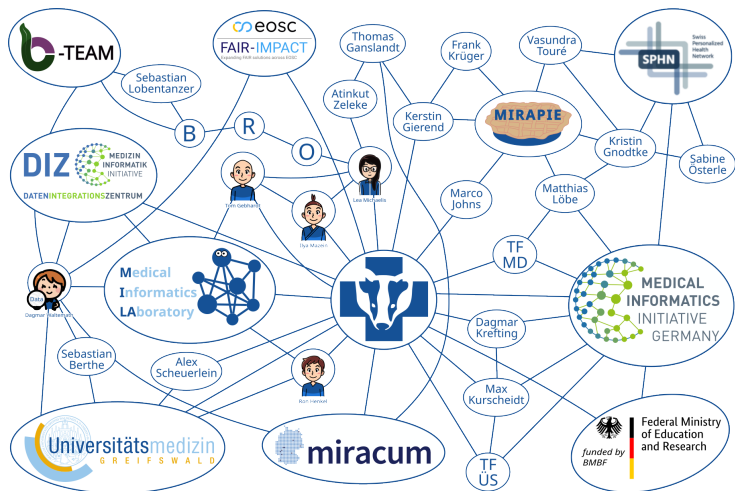
Summary: Who is MeDaX?



Personalised avatars, originals by oksmith found at openclipart.org



Acknowledgements



Thanks for your attention!



References and Repositories

- BioCypher paper: Lobentanzer et al., Nat. Biotech. 41, 1056–1059 (2023), doi: 10.1038/s41587-023-01848-y
- BioCypher repository: <https://github.com/biocypher/biocypher>
- BRO paper: Tenenbaum et al., J Biomed Inform 2011, 44(1):137-45, doi: 10.1016/j.jbi.2010.10.003
- BRO repository: <https://github.com/biocypher/biomedical-resources-ontology>
- CyFHIR repository: <https://github.com/Optum/CyFHIR/>
- DQA concept: Kahn et al., EGEMS (Wash DC) 2016, 4(1):1244, doi: 10.13063/2327-9214.1244 doi: 10.13063/2327-9214.1244
- Meta-Graph repository: <https://github.com/biocypher/meta-graph>
- MILA homepage: <https://www.medizin.uni-greifswald.de/medizininformatik/>
- MIRAPIE paper: Gierend et al., WWW '23 Companion: Companion Proceedings of the ACM Web Conference 2023, doi: 10.1145/3543873.3587562
- MIRAPIE repository: <https://codeberg.org/MIRAPIE/MIRAPIE>

