## Beyond Data: Mastering Management of Complex Research Data and Processing Environments (BeyondData2014)\*

Management of research data is becoming a crucial requirement for research- and memoryinstitutions as well as commercial R&D. In order to foster scientific innovation and simultaneously reduce redundant spending on data generation, efficient access to research results as well as their fundamental data is indispensable. Re-using research data is not only economically worthwhile, but convenient access to research data may also spur new research ideas and interdisciplinary innovation. Furthermore, with the rise of networked functional services, e.g. Cloud offerings such as software-as-a-service and dedicated data services (Big Data), a process-oriented, holistic approach to research data management becomes more and more important.

The full-day workshop "Beyond Data: Mastering Management of Complex Research Data and Processing Environments" covers current and upcoming challenges faced by memory institutions but also by research institutes and industry. The information age has changed the economic landscape and research environments thoroughly. Nearly every piece of valuable scientific or business information is created, transferred and stored digitally. Keeping digital research data available and usable has been proven to be more difficult than anticipated [VAA<sup>+</sup>14].

Moreover, information is not necessarily bound to single, easy identifiable digital objects but can be embedded in complex processes, which may include multiple interconnected machines and rely on external data service. For digital research data (respectively their technical data format) together with necessary processing environments even ten years are a huge timespan when trying to keep them accessible and usable as they are threatened by constantly changing technologies and the associated risk of hardware and software obsolescence. Even slight changes in configuration or soft/hardware environments may alter results significantly [GHJ<sup>+</sup>12].

## References

[GHJ<sup>+</sup>12] H.B.M. Gronenschild, P. Habets, H.I.L. Jacobs, R. Menglers, N. Rozendaal, J. van Os, and M. Marcelis. The effects of FreeSurfer version, workstation type, and Macintosh

<sup>\*</sup>Beyond Data: Mastering Management of Complex Research Data and Processing Environments (2014), http://beyonddata2014.wordpress.com [last access: 21.07.2014]

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[VAA<sup>+</sup>14] Timothy H. Vines, Arianne Y.K. Albert, Rose L. Andrew, Florence Débarre, Dan G. Bock, Michelle T. Franklin, Kimberly J. Gilbert, Jean-Sébastien Moore, Sébastien Renaut, and Diana J. Rennison. The availability of research data declines rapidly with article age. *Current Biology*, 24(1):94–97, 2014.

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