Non Volatile MRAM-based Asynchronous PROCessor

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Data Management Plan (DMP)

Project
Reference number : ANR CES_24
Title: **N**on **V**olatile MRAM-based **A**synchronous **PROC**essor
Acronyme : NV-APROC

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DMP
Created by : the PI of the coordinating partner 1
Version : v1
Last modified : 5 March 2021

1. DATA DESCRIPTION AND COLLECTION OR RE-USE OF EXISTING DATA

1a. How will new data be collected or produced and/or how will existing data be re-used?

The raw data will be created electronically as an output of simulations, or recorded on computers as an output of experimental instruments. These data are not sensitive from an ethical point of view.

1b. What data (for example the kind, formats, and volumes), will be collected or produced?

Digital data will be recorded on computers and servers, using the format best adapted to its use according to specific softwares and accessible to standard computational packages (Matlab, Origin, Cadence, Igor, Python,...). When possible, open format will be preferred.

2. DOCUMENTATION AND DATA QUALITY

2a. What metadata and documentation (for example the methodology of data collection and way of organising data) will accompany the data?

The data produced by each partner will be archived by the said partner, in the most convenient way possible and an appropriate labeling according to its own capabilities and informatics structures. For example, raw data will be archived in standard universal formats, such as .txt with explicit naming. An explanatory read me file may be archived if deemed relevant. Each partner has access to institutional local mass storage back-up systems for data retention and is responsible for the back-up of these data.

2b. What data quality control measures will be used?

Each partner will be responsible for the consistency, reproducibility and quality of data collection.

3. STORAGE AND BACKUP DURING THE RESEARCH PROCESS

3a. How will data and metadata be stored and backed up during the research?

The data produced are not sensitive from an ethical point of view. Unless decided otherwise by the partners, they will remain private as being potentially subject to intellectual property protection. They will be stored in the institutional computers and data centers of the different partners. Automatic back-up may be used when possible.

3b. How will data security and protection of sensitive data be taken care during the research

Storage on institutional data centers will ensure data security and protection. Data deemed relevant for distribution between partners may be shared directly. Trustworthy institutional archive files accompanied with private links distributed among partners may also be used for data dissemination between partners.

4. LEGAL AND ETHICAL REQUIREMENTS, CODE OF CONDUCT

4a. If personal data are processed, how will compliance with legislation on personal data and on security be ensured?

No personal data will be processed.

4b. How will other legal issues, such as intellectual property rights and ownership, be managed? What legislation is applicable?

This will be covered by a consortium agreement whenever possible and deemed relevant.

4c. What ethical issues and codes of conduct are there, and how will they be taken into account?

National and international codes of conducts and institutional ethical guidelines will be followed, see e.g. https://comite-ethique.cnrs.fr/

5. DATA SHARING AND LONG-TERM PRESERVATION

5a. How and when will data be shared? Are there possible restrictions to data sharing or embargo reasons?

Preprints of articles submitted for publication will be posted in public repositories such as HAL and arXiv unless prevented by the targeted publisher or to protect novelty until publication. Postprints or publishers version will be posted in public repositories, possibly with the legal embargo of six months. Data related to preprints of submitted articles, and postprints of published articles will either be made available publicly, or provided upon request. Any other data is potentially subject to intellectual property protection. Direct handling will be preferred. A trustworthy institutional data repository may be used if deemed necessary. Data sharing agreement between parties may be requested.

5b. How will data for preservation be selected, and where data will be preserved long-term (for example a data repository or archive)?

Long-time preservation of preprints of articles and postprints or publishers version will be ensured by posting in public repositories such as HAL and arXiv, see 5a. Data related to pre-prints of submitted and published articles will be archived in institutional repositories, ensuring long-time preservation.

5c. What methods or software tools are needed to access and use data?

No specific tool nor software will be necessary for access, in line with our access policy described in 5a.

5d. How will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured?

Dedicated tools will be used to ensure a unique and persistent identifier to each data set that will be made available publicly. For example, DataCite is an international not-for-profit consortium dedicated to the assignment of perennial identifiers (DOIs) for research data. As a member of the consortium, Inist-CNRS is the DOI perennial identifier allocation agency in France (see eg https://opidor.fr/identifier/).

6. DATA MANAGEMENT RESPONSIBILITIES AND RESOURCES

6a. Who (for example role, position, and institution) will be responsible for data management (i.e. the data steward)?

The principal investigators (PIs) of each partner are responsible for that partner's data. Data management plan implementation and updates are under the responsibility of the main PI.

6b. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

The dedicated institutional resources will be used.