

# EMDIS General Information

Initiated in 1992 as a European Union Project in the 3rd Framework Programme "Advanced Informatics in Medicine (AIM)", the European Marrow Donor Information System (EMDIS) has become the standard platform for computer-based registry communication today.

The aim of EMDIS is to establish a single virtual international donor registry allowing search coordinators to get the same information and services on international donors as accurately, timely and easily as from their own national donors. The scope of operation covers all aspects of an unrelated donor search from the preliminary search to the donor workup. Technically, EMDIS defines an open specification of a protocol for the electronic communication among registries. Therefore, EMDIS is implemented as an asynchronous peer-to-peer network connecting distributed, heterogeneous databases. Membership of EMDIS is free of charge. The community provides documentation, status information, software tools, support and a project management platform.

## References:

Maiers M. Information technology and the role of WMDA in promoting standards for international exchange of hematopoietic stem cell donors and products. *Bone Marrow Transplant*. 2010 May;45(5):839-42.

Müller CR. Computer applications in the search for unrelated stem cell donors. *Transpl Immunol* 2002; 10: 227-240.

Baouz A, Raffoux C. EMDIS: European Marrow Donor Information System. *Comput Methods Programs Biomed* 1994; 45: 45-46.

In 2019 the EMDIS 4.0 Whitepaper was published. It discusses current challenges of EMDIS, based on discussions at WMDA meetings, EMDIS working group meetings and the results of a survey among all EMDIS registries. It explains technical issues that are existent, but not yet business critical. Still there is a common understanding that the EMDIS world should be revamped and modernized. Derived from the long experience of the participating registries and the current demands of the community, the paper defines the goals of the revamp aims, such as modern and commonly accepted technologies, faster communication between registries, standard and freely available software components and technologies, smooth transition from existing technologies to new approach and open development process.

The idea is to modernize the technology stack by keeping the reliability and robustness of the existing system.

This whitepaper proposes a way forward to develop EMDIS protocol into new version (EMDIS 4.0). It explains and demonstrates solutions to upgrade EMDIS to a modern communication platform that meets expectations of all stakeholders in the WMDA community, including EMDIS and non-EMDIS registries, registries that want to keep existing IT systems and registries that develop new systems, search coordinators and technical people. All proposed technologies are modern, but as easy as possible to adopt for existing EMDIS registries.

[Download EMDIS 4.0 Whitepaper](#) (March 12, 2019)

In July 2020 the pilot phase of the EMDIS 4.0 pilot group was closed. The findings and results of the tests and discussions during the EMDIS 4.0 pilot phase were summarized in a final report which is now published here. The report gives an overview of the idea of what EMDIS might look like in the future and how it could function technically. It also contains a specification for a long-awaited feature: the Document Exchange via EMDIS.

The change away from e-mails to AMQP, the change away from a peer-to-peer network to a central infrastructure are only the first steps taken on the way to modernizing EMDIS. Changes in the EMDIS format from FML to XML and hopefully many new features will follow.

Please feel free to download the final report:

[EMDIS 4.0 Final Report \(PDF\)](#) and the [EMDIS 4.0 Final Report Executive Summary \(PDF\)](#)

- » [Main documentation](#)
- » [Participating registries](#)
- » [EMDIS Working Groups \(restricted\)](#)



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