



## INNOVATIVE MASS STORAGE TECHNOLOGIES

# IMST WHITE BOOK

**December 2007**

**Mass data storage, memories** for the future everyday life

A road map for the European R&D

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Until 2006, the White Book was produced under the auspices of the scientific committee of the Innovative Mass Storage Technologies Conference (IMST). Created in 2000 by European scientists and industrialists, this International Conference provides a unique opportunity to cover the latest advancements of research and to observe the latest trends in the areas of solid state, optical, magnetic and emerging technologies for data storage - see <http://www.imst.org>

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## 2007 IMST White Book

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Though the authors share the opinions and analysis expressed in this book, its content cannot be seen as being an official position from their respective institutions or companies.

*Dr Bernard Bechevet retired in June 2007. He is the co-founder of the cycle of IMST conferences and of the IMST White Book initiative. His energy and commitment at the workplaces and conferences will be deeply missed by his colleagues at CEA-LETI and indeed by all of the European data storage research community.*

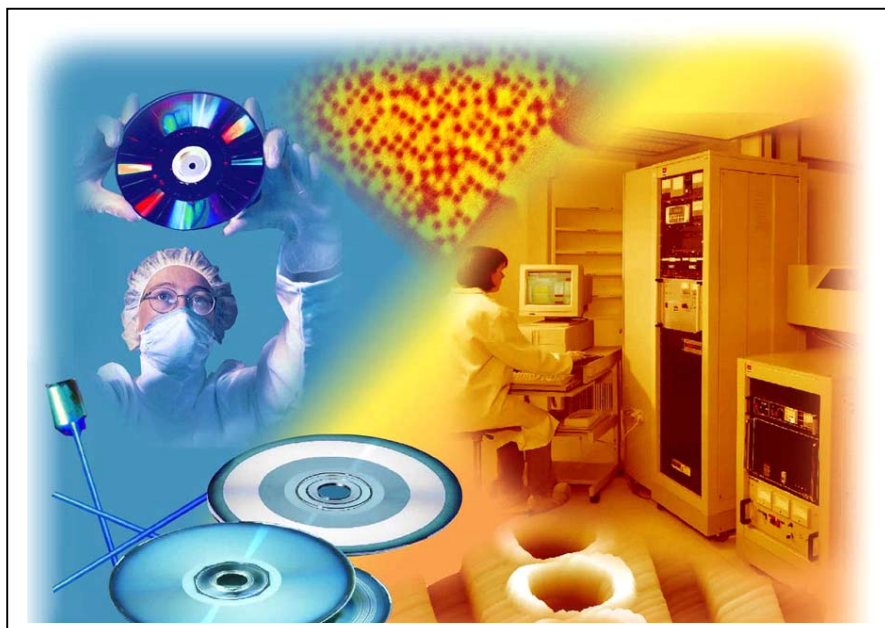
# Contents

**Section 1** first underlines the key role of Mass Data Storage in the Information and Communication Society and the proposed actions to strengthen the European position. **Section 2** offers an overview of the impact of Mass Data Storage on industry, economy and citizen life, and displays some of the most exciting opportunities opened in the near future. **Section 3** provides a thorough review of the technical trends, of the economic activity (with an incentive on the European position), in the four areas covered by the White Book: Solid State Memories, Optical Memories, Magnetic Memories and Emerging Technologies for Memories. In each case, the state of the European research is reviewed, and the authors underline what they consider the best actions to take to maintain and develop a strong EU based research and industry. **Section 4** is brief, but dedicated to a real challenge: how we will be able to transmit to the future the huge amount of data we create, using technologies that are so rapidly evolving. Finally **Section 5** gathers the views presented in each technical chapter to ensure the development and exploitation of appropriate R&D in Mass Data Storage Technologies in Europe. A short appendix list some current and past EU FP5 and FP6 funded research projects in the area of data storage and memory technologies.

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1	Summary .....	6
2	Mass data storage technologies in IST: challenges and opportunities, the European position .....	9
2.1	Information and Communication Technologies today: an area of opportunities, a major source of economic growth .....	9
2.2	Mass Storage Technologies .....	13
2.2.1	Data storage everywhere - A deep impact on citizen life and work .....	13
2.2.2	The memory... always a strategic part – research on generic technologies .....	14
2.2.3	Dreaming of the future: new applications .....	15
2.2.4	The markets - the European position and industry .....	17
2.2.5	The IMST conferences and the White Book .....	23
3	Overview of the main technologies for mass data storage: technical challenges, market trends, European position .....	25
3.1	Solid state memories .....	25
3.1.1	Needs and relevance .....	25
3.1.2	Memory Technology .....	26
3.1.3	Status of the Market .....	34
3.1.4	The role of Europe .....	37

3.1.5	Opportunities for Research .....	39
3.2	Optical memories .....	43
3.2.1	Optical discs today .....	43
3.2.2	Three generations optical storage .....	46
3.2.3	Improvements of CD, DVD and BD .....	47
3.2.4	Next generations .....	48
3.3	Magnetic Memories .....	66
3.3.1	- The on-going evolution of Magnetic storage in a fast changing context .....	67
3.3.2	- Mainstream magnetic storage technologies .....	72
3.3.3	Emerging magnetic recording technology: magnetic random access memory .....	93
3.4	Emerging technologies for mass data storage .....	100
3.4.1	Introduction - Are new technologies necessary? .....	100
3.4.2	Scanning probe-based storage .....	102
3.4.3	Nanoscale thermal memories .....	118
3.4.4	Biologically-inspired data storage .....	119
3.4.5	Spintronics : mixing spin and semiconductors .....	121
3.4.6	The role of Europe in Emerging Technologies .....	121
4	Preservation of Cultural Heritage .....	124
5	Recommendations to strengthen the European position .....	126
6	Appendix: Main European Projects on Mass Data Storage Technologies .....	134



*Image taken from the IMST Conference graphic files*