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Future Strategies and Visions: SUMS and SUMMA (Abstract)

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SUMS stands for System for Universal Media Searching. SUMMA stands for System for Universal Multi Media Access. These grew out of the needs of a scholar trying to organize and display material for a standard bibliography on perspective and research on Leonardo. The project began as a front-end using D-Base and Toolbook as frameworks. The limitations of Toolbook led to a decision to develop our own solution using C++ with the help of a small team of young programmers.

Since this work involved materials in major libraries and museums, it gained the attention of the Canadian Heritage Information Network (CHIN), through a keynote lecture in Winnipeg in 1990[1], and to a wider audience through a keynote at the CIDOC section of ICOM (Quebec, 1992)[2]. In February, 1995, SUMS was chosen as one of 18 national projects to represent Canada at the G7 Information Society Exhibition in Brussels. It was chosen again for the World Summit in Halifax (June 1995). On that occasion the members of G7 agreed to go ahead with 11 pilot projects relating to the major areas of the information society[3]. Each of these projects had a lead country. Italy was chosen to head Pilot Project 5, Multimedia Access to World Cultural Heritage, which focusses on museums. At the Information Society and Developing Countries (ISAD) Conference in Midrand, South Africa (May 1996) four projects from Italy and Canada were chosen to represent Pilot Project 5[4] (fig. 1).

Function	Exhibit	Organization	City
Capture	3-D Laser Camera	National Research Council	Ottawa
Archive	Florence, Leonardo	Museum for History of Science	Florence
Display	Tomb of Nefertari	Infobyte, ENEL	Rome
Navigate	SUMS	SUMS Corp.	Toronto

Fig. 1. List of four sections of G7 pilot project 5.

SUMS began as an interface to local databases. It was extended to include seamless links with the Internet. When HTML made great advances, plans for a fully proprietary software were abandoned, and it was decided instead to use this alternative as a temporary solution. One aspect of SUMS' originality lies in a new combination of items which, in isolation, are very familiar. The underlying philosophy is to keep the tools for navigation as simple and homogeneous as possible notwithstanding changes in levels of education and enormous changes in complexity of facts. The key idea is that one can get to the same information in a variety of ways.

One method is via maps. This will in future be linked with GIS, AM/FM and GPS. A second method is by asking six basic questions: who, what where, when, how and why? This are used in conjunction with ten basic choices (fig. 2). The power of SUMS comes

through combinations of these ten basic choices. Each of these breaks down into further lists of ten or less choices. There are hundreds of these lists. Combined in various ways these generate many thousands of choices.

1. Access
2. Learning
3. Levels
4. Media
5. Quality
6. Quantity
7. Questions
8. Space
9. Time
10. Tools.

Fig. 2. List of ten basic choices in SUMS.

SUMS is a first step towards SUMMA, which will eventually have four interrelated functions:

1) classing (or tagging) information to make it searchable and classing knowledge to create personal search engines
2) searching seamlessly in a distributed environment
3) organizing the results of one's searches
4) learning in new ways.

The lecture will demonstrate these basic principles and outline some possibilities for museums of the future. The published paper will focus more specifically on the implications of SUMS for the core fields in databases such as the Canadian Heritage Information Network and the Museum Documentation Association.

Notes
[1] "Can Museum Computer Networks Change Our Views of Knowledge?", *Museums and Information. New Technological Horizons. Proceedings*, Ottawa: Canadian Heritage Information Network, (1992), pp. 101-108.
[2] 1992 ICOM Conference, CIDOC section, Opening Keynote Address, "Past Imprecision for Future Standards: Computers and New Roads to Knowledge", Quebec City, September 1992. This was published as: "Past Imprecision for Future Standards: Computers and New Roads to Knowledge", *Computers and the History of Art*, London, vol. 4.1, (1993), pp. 17-32.
[3] The eleven pilot projects of G7 are as follows:
1. Global Inventory (of Projects)
2. Global Interoperability
3. Cross Cultural Education and Training
4. Bibliotheca Universalis
5. Multimedia Access to World Cultural Heritage
6. Environment

7. Global Emergency
8. Government On-line
9. Global Healthcare
10. Global Marketplace for SME's
11. Maritime Information Systems.

[4] The particular examples at the ISAD exhibition were chosen because they represented new methodologies in key areas of cultural heritage. The organizers were conscious that there are other excellent examples in all of these key areas. For example, with respect to capturing material there are, of course, the VASARI scanner, the IBM scanner, originally used in the Brandywine project and now being used at the Vatican Library, and the suitcase camera developed by the Italian National Research Council (Consiglio Nazionale delle Ricerche), which is being used specifically for archaeological and museum projects in Naples. A greater spectrum of these projects was organized by the the Italian Ministry of Culture for the Mediartech Exhibition in Florence.

The G7 projects are intended to be complementary. The information from museums (project 5) has many links with the materials in libraries (project 4 directed by France) and relates closely to education (project 3). To make this work on a global basis requires awareness both of various hardware and software (project 1) and interoperability between/among different solutions (project 2 directed by Canada). Hence it is foreseen that the future will almost inevitably bring more co-operation between all five of these initial projects.