IRSN
INSTITUT
DE RADIOPROTECTION
ET DE SÛRETÉ NUCLÉAIRE

SARNET

[A NETWORK OF EXCELLENCE FEDERATING EUROPEAN RESEARCH ON CORE MELTDOWN REACTOR ACCIDENTS]

COORDINATED BY IRSN, THE SARNET NETWORK IS A PROJECT BELONGING TO THE 6TH EUROPEAN COMMISSION R&TD FRAMEWORK PROGRAMME. THE KEY OBJECTIVES OF THIS PROJECT ARE:

- IMPROVING OUR UNDERSTANDING IN THE FIELD OF CORE MELTDOWN REACTOR ACCIDENTS AND THEREBY IMPROVING REACTOR SAFETY,
- OPTIMISING THE USE OF RESEARCH RESOURCES AVAILABLE IN EUROPE,
- PRESERVING DATA BANKS (DEVELOPING COMPUTATIONAL TOOLS) AND DIFFUSING KNOWLEDGE.

DPAM - MAJOR ACCIDENT PREVENTION DIVISION

[FOUR KEY ACTIVITIES TO CREATE THE NETWORK'S LINKS]

ANALYSING REQUIREMENTS AND DEVELOPING EUROPEAN RESEARCH PROGRAMMES

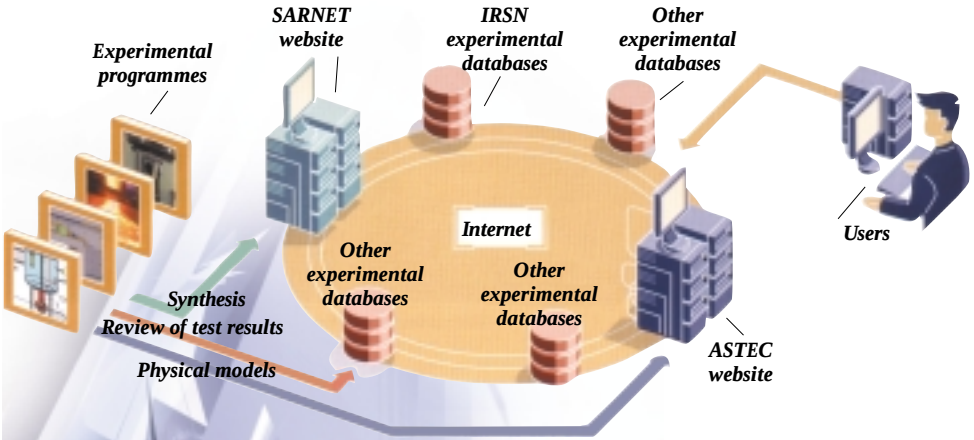
REVIEWING AND SUMMARISING KNOWLEDGE IN THE THREE KEY FIELDS

- Core degradation and the progression of the mixture resulting from the core meltdown,
- Thermomechanical stress on the reactor containment and the resistance of this containment,
- Transport and physico-chemical behaviour of radioactive products released during core degradation and meltdown.

DEVELOPING REFERENCE TOOLS AND METHODS REQUIRED TO EVALUATE SAFETY, IMPROVE REACTOR TECHNOLOGIES AND ELABORATE ACCIDENT MANAGEMENT PROCEDURES

- The ASTEC scientific computer programme designed to capitalise on acquired knowledge in the form of mathematical models, in turn used to numerically simulate the behaviour of a reactor during a core meltdown reactor.
- A reference method for level 2 probabilistic safety assessment (probabilistic studies of the consequences of a core meltdown accident).

DIFFUSING KNOWLEDGE VIA TRAINING COURSES FOR STUDENTS AND YOUNG RESEARCHERS, DEVELOPING LESSONS AND REFERENCE MATERIALS AND ORGANISING INTERNATIONAL CONFERENCES.



Finality

Developing knowledge and tools to improve reactor safety while providing a framework for European research.

IRSN/DPAM/DIR/COM - 04 42 25 32 53 - Avril 2004 /réalisation : Signum com.