



The IPR in collaborating activities with Academia

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ACADEMIA AND INDUSTRY HAVE STRICTLY COLLABORATED TO THE DEVELOPMENT OF NOVEL MAGNET CONCEPTS OVER THE PAST 40 YEARS.

THE RELATION HAS ALWAYS BEEN “HEALTHY” AS ACADEMIA HAS ALWAYS BEEN CONCENTRATED IN THE REALIZATION OF PHYSICS EXPERIMENTS AND (MOSTLY) ONE-OF-A-KIND SYSTEMS, WITH LIMITED OR NO REAL COMMERCIAL EXPLOITABILITY

THIS IS SLOWLY CHANGING AS MANY INSTITUTIONS ARE FOCUSING MORE AND MORE IN DEVELOPING TECHNOLOGIES THAT CAN BE EMPLOYED OUTSIDE THE RESEARCH ENVIRONMENT: A POSITIVE MOMENTUM AIMED AT CREATING AN AMPLER RETURN OF INVESTMENT FOR PUBLIC MONIES

BUT: MAGNETS’ DOMAIN HAS A LIMITED NUMBER OF PLAYERS AND KNOW-HOW IS THE NAME OF THE GAME AND DISCRIMINATING THE TOP PLAYERS FROM THE COMPETITION.

FURTHER TO THE ABOVE, THE SCENARIO IS CURRENTLY BECOMING MORE COMPLICATED AS RECENTLY MANY NATIONAL RESEARCH INSTITUTIONS HAVE IN THEIR MISSION TO GIVE BIRTH TO COMMERCIAL SPIN-OFFS AND TO FOSTER NATIONAL INDUSTRY (ENEA IN ITALY, CEA IN FRANCE, CIEMAT IN SPAIN)

THE ALTERNATIVES ARE LIMITED IN ORDER TO KEEP IPR ACTUALLY RESTRICTED (VS NOMINALLY RESTRICTED):

- **THE FORMATION OF AD HOC CONSORTIA OR JVs BETWEEN/AMONG ACADEMIA/INDUSTRY WITH A SPECIFIC MISSION/BUSINESS PLAN**, thus **IPR REMAINS IN THE INSTRUMENT OF CHOICE** (but this is contrary to tech transfer/dissemination)
- The traditional collaboration method (followed by F4E/CERN/INFN/CEA many times in the past): **ACADEMIA DEVELOPS A DETAILED CONCEPTUAL DESIGN OF THE MAGNET, THUS RELYING ON INDUSTRY FOR THE “INDUSTRIALIZATION”**, i.e. the ascertainment of the feasibility of the conceptual design, of the hypothesized tolerances and budget,

Such process creates a **CLEAN SEPARATION OF THE IPR BETWEEN THE PARTIES:**

- ACADEMIA OWNS THE OVERALL DESIGN OF THE SYSTEM,**
- INDUSTRY OWNS THE MANUFACTURING METHODS**, most often in the shape of **PROPRIETARY KNOW HOW RATHER THAN PATENTS**

Multi-layered Approach	IP	
Open Access	Magnet Functional Characteristics Field intensity, DSV dimensions and homogeneity, Fringe field footprint Warm bore size Magnet size	Available in web pages or in information to prospective clients
Commercial Access	Top level mechanical drawings Top Level Electromagnetic design (possibly)	
Limited Access (Under NDA FuSuMaTech need-to-know Partners)	Force distribution Mechanical interface	Only under NDA
	Cooling solutions Top level protection strategy	NEVER DISCLOSED and only owned by Industry
No Access (ASG Trade Secret and Patent Portfolio)	Design, manufacturing and process IP	