Discussion of research policy

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How does one develop a fruitful relationship between research and practice?

(1) Patience: it takes fifteen years.

(2) Personal relations: collaboration on a day-to-day basis between industry and research group.

(3) Choose research topics susceptible to known scientific research methods.

(4) Avoid fashionable buzzwords, well-tilled fields, popular misconceptions.

(5) Follow research right through to standardisation.

What is Systems Engineering?

Goal: Reduction of cost and timescales and increase of quality in IT products.

The method is the same as in all branches of science and engineering.

(1) Mathematical modelling of specifications, designs, documentation, programs and products.

(2) Development of calculi and procedures soundly based on theory, to contribute at all phases of the system life cycle, and adapted for specific areas of application.

(3) Concentration on interfaces between design phases and between components implemented in different design technologies.

(4) Abstraction provides conceptual unification of differing applications and technologies.

(5) Avoidance of operational reasoning and exaggerated promises.

What is wrong with computing science Basic Research in Europe?

(1) It has become too fragmented into schools, each with its own texts, journals, conference series, and each claiming or promising a solution to all problems.

(2) Nobody is interested in results produced by any other school.

(3) The technique of periodic calls for collaborative proposals directed at specific collections of buzzwords is making the situation worse.

(4) Funding cuts and funding gaps are no help either.

Solution: More integrative projects like PROCOS, and CONCUR where requirements of a working demonstration motivate genuine collaboration between schools.

Establish research like agriculture as something Europe and UK want to do on a regular basis.