

“Our participation seemed only natural”

Three questions for Prof. Dr.-Ing. Adam Wolisz
 Professor of Telecommunication Networks at the TU Berlin

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Prof. Dr.-Ing. Adam Wolisz

Why did you decide to become a member of the Joint Technology Initiative?

Using a novel multilevel funding scheme, this private-public partnership is breaking new ground for all stakeholders, starting with the Commission, and following through to the national funding agencies, industry and academia. The ARTEMIS JTI follows in the footsteps of the ARTEMIS European Technology Platform (ETP) established by the major European industrial players in the embedded systems area to maintain and consolidate the European leadership in this crucial industrial sector.

One of the major goals that the ARTEMIS ETP set itself was to establish an integrated European research and development strategy for this area. The Strategic Research Agenda (SRA), the main output from the ETP, has identified communications and middleware as one of the three

research domains that are indispensable to the initiative's success. Given that the TU Berlin has a strong track record in these and related areas, our participation seemed only natural. Our proven expertise in building energy-efficient system architectures and communications services for networked embedded systems, as well as our wireless indoor sensor network test bed, TWIST, the largest of its kind in Europe, and of equal standing with the world's best, are unique assets that can help us achieve the goals of the JTI.

What do you hope to gain from your membership in ARTEMISIA?

The JTI's specific industry-centred focus gives us quite a different type of leverage than is possible with traditional FP7 instruments. Let's be frank: there is and always will be an intrinsic tension between the position of a university with its long term research and the position of industry, strongly influenced by factors such as market reality.

ARTEMISIA is an association of the R&D stakeholders involved in the ARTEMIS JTI and hence can play a crucial role in resolving this intrinsic tension in dialogue with the industrial players. The harmonised positions of numerous R&D stakeholders will be able to gain much greater significance in dialogue with industry, which is – by nature – more powerful. Free access to the senior executives responsible for industrial R&D planning, something that is usually unachievable for a single university or research institute, contributes valuably to building an intimate understanding of the sector's future needs.

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Dear Readers,

The first calls for the Joint Technology Initiatives (JTIs) were published in spring 2008 and now open up opportunities for universities and research organisations to take part in this new instrument of the 7th Research Framework Programme. In the preparatory discussions it already became quite clear that the Joint Technology Initiatives, as no other funding model, exemplify the idea behind the European Research Area, namely a space for innovation in which science and industry can concentrate their respective expertise to answer questions of fundamental importance. This approach points to the future, but also calls for a substantial willingness to collaborate on the part of all the players involved. Science, business, industry, and the politicians at national and European level who set the frameworks have to engage in constructive collaboration. We have collected a range of opinions on the profile, the opportunities and the challenges of this new funding instrument.

KoWi, the EU Liaison Office of German Research Organisations, will be pleased to provide you with information and advice on the Joint Technology Initiatives.

Best regards,
 Dr. Jens-Peter Gaul
 KoWi Director

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It is in this spirit that ARTEMISIA's primary role lies in continually revising the shared perspective of the R&D members and in representing this perspective within the JTI, and especially in the process of translating the SRA's high-level strategic goals into more operational ones, namely the Research Agendas (RAs) that serve as the basis for prioritising topics in the annual Calls for Proposals. Our membership allows us to influence those research agendas by advocating the introduction of new areas into the Strategic Research Agendas that we see as essential.

On the other hand, participation in the dialogue with other leading research bodies and with industry helps us to calibrate our research agendas and curricula, and so master the challenges of the future, thereby enabling us to retain our strong position in the domains of wireless sensor networks and cooperating objects research.

How do you think this will influence relations with industrial partners?

The goals pursued by ARTEMIS SRA can only be achieved by taking a wider focus than the existing ITEA and MEDEA formats. The ultimate success of including academic institutions in this process will depend not only on the results of the joint research projects, but also on the degree to which the "research landscape" aspects of the SRA are realised, such as the unification of educational programmes in the field of embedded systems, the joint mentoring of PhD students, cooperation on standardisation efforts, sharing test beds and demonstration platforms, promoting open-source software solutions, etc.

Working under the ARTEMISIA umbrella, we hope to consolidate this type of partnership with industry on a pan-European scale.

The potential for decisive improvements

Interview with Cornelia Yzer, Director-General of the German Association
of Research-based Pharmaceutical Companies (VFA)

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Cornelia Yzer

How do you see the fear that the IMI is used to boost drug company profits with public funds?

The IMI does not finance any product-related research, but rather pre-competitive basic research that prepares the ground for highly-efficient biopharmaceutical research and development. For example, just think of the new biomarkers or instruments developed for even better toxicological tests. The companies themselves then have to invest in the pharmaceutical products that they later develop with these. In any case, half of the IMI budget is provided by the drugs manufacturers. The additional one billion euros provided by the European Commission flows exclusively into the budgets of public research organisations and of SMEs. So, these fears are unfounded.

What exactly makes out the added value of the Joint Technology Initiative on Innovative Medicines (IMI) as far as cooperation with industry, research and small and medium sized enterprises (SMEs) in the field of innovative medicines is concerned?

The IMI addresses a core area of the pharmaceutical industry's competitiveness, namely the major cause of delays and project failures in the development of innovative medicines. The IMI makes it possible to carry out projects that could not be managed by individual companies or countries. Europe's best experts from industry, academic research and SMEs have been mobilised to achieve this. The added value is generated because more than just those directly involved in the project profit from the results.

How sustainable are such initiatives?

The IMI is the first comprehensive funding programme on health research to have been initiated by industry. Thanks to its high financial value, the long programme term up to 2017, and the good interlinking with national programmes – such as the Federal Research Ministry's current Pharmaceuticals Initiative – the IMI has the potential to decisively improve the environment for biopharmaceutical research and development in the EU. In addition, the IMI will lead to networks of research organisations, authorities, SMEs, major companies, clinics, patient interest groups and licensing agencies developing that then extend beyond 2017.

The Joint Technology Initiatives

Joint Technology Initiatives (JTIs) were created as a new funding instrument when FP7 was introduced. These JTIs are public-private partnerships whose origins extend back to the European Technology Platforms. Their goal is to specifically drive forward the development of important fields of technology in Europe. Under Article 171 of the EC Treaty, JTIs can be formed by establishing a joint venture. Their aim is to secure long-term cooperation between science and industry in the respective field.

The first package of measures saw four JTIs launched at the end of 2007 with a total of more than 9 billion euros of research funding raised from various sources (public and private, as well as national and European):

- Innovative Medicines (IMI), <http://imi.europa.eu>
- Nanoelectronics (ENIAC), <http://www.eniac.eu>
- Embedded ICT Systems (ARTEMIS), <http://www.artemis-office.org>
- Clean Aviation (Clean Sky), <http://www.cleansky.eu>

Further JTIs are beginning to appear on the horizon, including, specifically, projects in the following areas:

- European Hydrogen and Fuel Cell Technology Platform (HFP), <http://www.hfpeurope.org>
- Global Monitoring for Environment and Security (GMES), <http://www.gmes.info>

Key Dates:

- Submission deadline for Expressions of Interest on the 1st Call for Proposals for the IMI: 15 July 2008
- Submission deadline for Expressions of Interest on the 1st Calls for Proposals for ARTEMIS and ENIAC: 3 September 2008

A challenge for players from science and research

Dr. Uwe Möller (DLR, Brussels Office),
Dr. Susan Kentner, Annika Thies (Helmholtz, Brussels Office)

The 7th Research Framework Programme (FP7) is setting up the first Joint Technology Initiatives (JTIs) as an instrument for public-private partnerships (PPP) in the field of research. Each JTI has its own organisational structure and focus, which is why any statement by the research organisations can only relate to general aspects:

The European Commission focused all the JTIs on business and industry, through which the development of the JTIs is primarily dominated by (big) industry. Conversely, this gives less consideration to the needs and interests of smaller players from academia, SMEs, and research.

Furthermore, the enormous financial volume and organisational format of the JTIs, in their capacity as PPPs, has led to these initiatives facing long and difficult preparations, since no standard procedures exist. Smaller players can only afford with difficulty to put in such time and effort; inherently, this means it is hardly possible, simply for practical reasons, for these to establish their own independent position.

Most JTIs offer extra EU funds, whereby each call for proposals is subject to different funding and submission conditions. This means that submitting a proposal is more complicated and that it is more difficult for applicants to fully grasp the various funding guidelines. This in turn contradicts the announcement that the FP7 would introduce procedures that are both more efficient and more straightforward. Disturb-

ing trends can be seen as far as the intellectual property rights (IPRs) of JTIs are concerned. Many European research organisations, for example, consider the IPR policy adopted by the Innovative Medicine Initiative (IMI) to be problematical.

The worldwide access rights for major companies are one of the points of criticism. There is a danger here that European research funds and free-of-charge access to the patents of European researchers could ultimately strengthen the competitiveness of drugs companies operating outside Europe. Other rules and arrangements often constitute major disadvantages for universities and research institutions as well. Industrial participants are afforded a position that makes it possible to obtain the exploitation rights to project findings and as well as other existing property rights at no cost.

The IMI's IPR policy partly contradicts the IP rules set out in FP7 and is, hence, also politically questionable, since it undermines the relevant resolution adopted by both Council and Parliament. As the research organisations see it, medium-sized joint research projects in which the partners deal with each other as equals must continue to constitute the core of the Research Framework Programme in the future. The recently announced midterm evaluation of the FP7 should analyse the above-mentioned aspects in detail.

An analysis of the official IMI IPR Policy and an assessment of the consequences can be found at: www.helmholtz.de/imi.

Guest Article Testing a new funding instrument in practice

Wilfried Kraus
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Wilfried Kraus

The Research Framework Programmes (RFPs) have seen quite a few funding instruments come and go in their time. So, it is no surprise that FP7 also comes with a new funding instrument based on Article 171 of the EC Treaty, the Joint Technology Initiatives (JTIs).

The EU's contribution to the five JTIs already adopted is quite substantial at more than 3 billion euros. All in all, this financial commitment by the EU means that some 9.8 billion euros of research funding have been mobilised at EU level. European industry is showing a lively interest in the JTIs with their strong applied focus. After all, JTIs are true public-private partnerships (PPP) of great inno-

vative potential. The European Commission has – as intended – succeeded in outsourcing a substantial amount of the project and programme administration. To this extent, some of the key goals pursued by the JTI funding instrument seem to have been achieved.

When discussing the regulations on establishing the JTIs, however, it already became evident in the Council that the JTIs have some structural deficiencies. The management structures, funding and call conditions (including IPR rules), and programme structures differ in practically all the JTIs.

This leads to neither the SMEs nor the universities and research organisations being able to fully grasp the various regulations.

In some cases, research organisations and universities even feel disadvantaged, because special arrangements exist on IPRs that deviate from the participation rules for FP7.

Some reservations also exist in respect of the promised simplification of the funding procedure, because the FP7's funding and financial rules are to be increasingly applied. Not only the participating industrial partners then ask themselves how this is to simplify and accelerate the procedure. If we consider that the groundwork for creating the basic structures for the JTIs has already taken more than three years, it is indeed hardly possible, anymore, to recognise where cost and effort have actually been reduced.

Conclusion:

- The Framework Programmes need funding instruments that open the door to more PPPs in the field of research at European level and that take into account the various frameworks in the many different areas of research and industry. Only by doing so will the EU be able, in the long term, to retain and expand its innovative force against its global competitors. The JTIs can contribute valuably to achieving this goal, which is why Germany also gave its express support in the Council to the creation of the five JTIs.
- Some of the above-mentioned problems are nothing but start-up difficulties that can and should be resolved in the next few months.
- However, there is a need to further standardise the JTI instrument for the future and to resolve the recognisable structural deficiencies, in particular in order to prevent the uncontrolled development of funding conditions, management structures, and IPR rules.
- The new funding instrument needs time to prove itself in practice. The JTIs will be evaluated after three to four years, and the results should be introduced when readjusting the next Research Framework Programme.