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APM

ANSA Technology Transfer Plan

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Abstract

Technology transfer to sponsor companies has never been an easy task since it relies not only on ANSA staff but crucially on the willingness of sponsors to cooperate. If sponsors do not cooperate, then this may be due to the content of the workprogramme. If the workprogramme is does not find favour with the sponsors then **one way to find out is by working closely with sponsors on mutual technology transfer.**

This document is a technology transfer plan. It lists the items which make up the technology transfer process and for each sponsor lists what has recently been done, their current status and plans for the next 6 months.

The document is a living document and must be updated frequently (this is a weakness) but also reflects the latest information regarding TT (this is its strength).

THIS DOCUMENT IS CONFIDENTIAL TO APM SINCE SOME CONSULTANCY AND TECHNOLOGY TRANSFER TAKES PLACE UNDER NON-DISCLOSURE AGREEMENT AND ON A ONE-TO-ONE BASIS BETWEEN APM AND PARTICULAR SPONSORING COMPANIES.

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1 Introduction

Technology transfer to sponsor companies has never been an easy task since it relies not only on ANSA staff but crucially on the willingness of sponsors to cooperate. If sponsors do not cooperate, then this may be due to the content of the workprogramme. If the workprogramme is does not find favour with the sponsors then one way to find out is by working closely with sponsors on mutual technology transfer.

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Note: This document may be split into multiple documents: One general overview document which describes the process of technology transfer. For each sponsor then there should be a separate document which describes the technology transfer plan for that sponsor. This will document such individual plans and make the management of the process for each sponsor easier.

1.1 What is Technology Transfer?

Technology transfer is a two way process by which

- technology, ideas and prototypes developed in the context of the ANSA programme are made *available* to and *usable* by sponsoring companies, and
- requirements, problem context and product developments in the context of sponsoring company's business are made *visible* and where appropriate *available* to the ANSA team.

The process is in two parts. One for new sponsors, where the emphasis is on building up a working relationship and agreeing a technology transfer plan. The other is for existing sponsors where the emphasis is on maintaining the technology transfer plan. Sponsoring companies have very different cultures. Tailor-made plans are therefore necessary. For some companies technology transfer does not need as rigorous a plan as others.

1.2 New sponsors programme

The *aim* of this programme is to bring new sponsors up to date with

- the background to ANSA (the stockpile)
- the current workprogramme

The *objective* is to

- create a first class interface
- identify further needs and interests in the sponsoring company

It is envisaged that this part of the programme should take the first year of a new sponsors involvement. After one year the regular sponsor servicing programme takes over.

1.3 Regular sponsor servicing programme

The *aim* of this programme is

- to create an opportunity to regularly update the sponsors with new developments in the programme
- to obtain feedback on possible new directions.

The *objective* is to

- maintain strong buy-in
- have ready made case for continued sponsorship when sponsors approach their annual budget rounds

This programme is to be executed in two parts:

- frequent visits by the project director to
 - identify political and funding issues
 - review the technology transfer process (6 monthly)
- frequent visits by technical staff to implement the technology transfer

1.4 Risks

The main issue here is a lack of involvement from sponsors. This could be brought back to the programme itself

- not being exciting enough
- not addressing issues of concern to the sponsor

These causes should be detected during the execution of the plan.

1.5 Recording of effort

There are separate effort codes within Phase 3 for work with sponsors:

- Consultancy: time on sponsor consultancy days. These are loosely defined as “team-days” where a typical team consists of 2-4 persons. They are agreed in advance with a sponsoring company.
- Technology transfer: only large chunks of effort are booked here: things like reviews, help with ANSAware or other prototypes and informally arranged team interactions. Short interruptions cannot be booked (e.g. phone calls).

Both these get added together in progress reports for Technical and Management Committee meetings and reported in terms of person-months.

Consultancy days are recorded as per what was agreed with particular sponsor companies. Thus, due to the varying team-size on consultancy days,

there is not necessarily a direct relationship between hours booked and consultancy days agreed.

1.6 Main intererests

The idea is to include a table which, for each sponsor, ranks the importnace the place on a particular part of the work programme (e.g. DIMMA, ISF).

2 New sponsors programme

Elements of the new sponsor programme are:

- **Initial visit:** the initial visit is to establish a plan for the start of the new sponsors programme. It should identify topics of particular interest and people who would benefit from ANSA results in the short term.
- **Workshop:** following from the initial visit, the workshop addresses those who were identified as likely to benefit from ANSA results. The workshop is tailored to give a wide ranging overview of ANSA past present and future. It is a one or two day event for English speaking sponsors, longer where culture dictates.
- **Electronic access:** to FTP servers is set up by default for new sponsors. For new and existing sponsors Web and FTP access need monitoring regularly to make sure that sufficient use is made of this facility and where lacking we need to follow up why this is so.
- **Training course:** training materials developed in the BU are used to provide in-depth briefings to groups of technical staff.
- **Team exchange:**
 - sponsor staff are given the opportunity to visit the ANSA lab in Cambridge for visits, possibly lasting several weeks.
 - ANSA staff may be given the opportunity to work at a sponsors site for a period of possibly several weeks.

Emphasis is on technical staff developing a strong personal and technical relationship.

- **Develop technology transfer plan:** this activity needs to proceed in the background to the others. A clear plan indicates it is time to move to the maintenance programme.

Some sponsors may wish to second a person straight away.

2.1 Barclays

2.1.1 History

2.1.1.1 *Initial visit*

DME and RvdL visited Knutsford early 1994. We agreed to add value to a project which is establishing an interim systems architecture for the IS group.

2.1.1.2 *Workshop*

The initial visit was followed up by a meeting with Dave King at APM. Around 5 team members attended. We tried to set up further meetings, but failed to

follow up on the consultancy given due to work pressures at Barclays and a subsequent lack of response to our requests.

2.1.2 Current status

A further visit by DME and RvdL to Knutsford was planned for 12 June 1995. The objective was to revive interaction.

Before this meeting could take place however, Dave King informed RvdL that his group was not the right group to fund ANSA. The trial sponsorship was to end. Dave suggested Andy Boardman of the network division might be a better contact and it was arranged for DME, Dave King and Andy Boardman to meet. This meeting was later cancelled.

2.1.3 Planned activities

No further actions. It may be possible to make contact with the Barclaycard group working on electronic shopping malls.

2.2 DRA

2.2.1 History

DRA joined in January 1995.

2.2.1.1 Initial visit

There was less pressure for an initial visit since the contacts with John Holmes were very good anyway. Telephone and e-mail contact delivered an agreement to implement a workshop with the aim of spreading the ANSA message amongst several groups at DRA (eventually leading to support for sponsorship fees from several groups).

2.2.1.2 Workshop

Despite pressure, the April deadline for this workshop was missed. We did arrange a workshop on CORBA and ANSA for one group at DRA (Robert Rankin) and this was delivered by AJW on 20 March 1995.

Andrew Herbert gave a presentation to various groups at DRA on 29 June 1995.

2.2.2 Current status

We expect a further workshop may be required in September 1995.

2.2.3 Planned activities

RvdL to contact John Holmes regarding future activities.

2.3 Eurocontrol

2.3.1 History

Eurocontrol joined in March 1995.

2.3.1.1 *Initial visit*

Just before joining RvdL and Ben Bakker produced a list of actions and benefits. The formal initial visit was delayed due to Eurocontrol relocating itself to a site outside Brussels (near the airport).

2.3.1.2 *Follow up visits*

AJF and RvdL met Ben Bakker with a view to developing the technology transfer plan (19 May 1995). A plan for the period to end September was drawn up.

2.3.1.3 *Gaas review*

20 June 1995: RvdL and AM visited Eurocontrol for a briefing on the recent developments in the area of (dis)agreement on architecture for ATC and a preparatory meeting with GAAS project representatives.

21 June 1995: RvdL and AM attended the GAAS presentation and demonstrations as observers.

end June 1995: RvdL and AM reported on GAAS meeting with a draft report on GAAS and recommendations regarding Eurocontrol's future stance on architecture projects.

2.3.2 **Current status**

Eurocontrol have requested brochures about APM to distribute round their organisation for the second time.

Ben Bakker is the TC representative and will coordinate all interactions between Eurocontrol and ANSA for the time being. Eike Meyenberg is Management Committee representative. Gert Lauter is principally involved in DED 2 architecture work.

Any consultancy days have to be **formally** agreed with Eurocontrol staff.

2.3.3 **Planned activities**

July and August 1995: provide specific help with the Internal Architecture Task Force. Two areas were identified: enterprise modelling and standards for interoperability.

September 1995: ANSA members to prepare a workshop for Eurocontrol Agency and Member state attendees.

2.4 **Fujitsu**

2.4.1 **History**

Fujitsu formally joined on July 1st 1995.

An outline of technology transfer activities was presented to Fujitsu staff (14-15 March 1995).

2.4.2 Current status

2.4.3 A first meeting is being planned with the aid of FJ staff at ICL.

2.4.4 Planned activities

2.4.4.1 Initial visit

This is being planned for July 1995. First stage of staff selection suggests: GXL (for real time and culture), AJW (for continuity: he will follow up in Nov. on the back of an OMG meeting in Japan), CMM (training), RvdL/AJH (for overview, planning technology transfer etc.)

We expect to cover the workshop and training course during a two week visit to Japan.

2.5 Siemens

2.5.1 History

Siemens have not joined yet.

2.5.2 Current status

awaiting decision to join

2.5.3 Planned activities

none

2.6 Telefonica

2.6.1 History

Telefonica signed contracts in February 1995.

Before they did so they bought an ANSAware training course in 1994.

2.6.1.1 Initial visit

RvdL visited Telefonica I&D in February 1995 and met most of the team working in distributed systems and TINA. Contacts between these team members and ANSA staff were forged. No personal contact between team members has taken place yet, but the following technology has successfully been transferred using phone and electronic means:

- Matchmaker software: Telefonica have ported this to Solaris and are using Oracle instead of AllBase (contact Raul Gutierrez); BT and CNET are also interested in this port.
- Gateway technology: discussions are ongoing with BAFC, YH and Juan Ruano.

2.6.1.2 Follow up visit

AJH was in Madrid 9-10 May 1995. He provided material for a management overview and to identify technology transfer needs.

2.6.2 Current status

No further steps were identified.

2.6.3 Planned activities

Investigate need for training course or extended workshop.

3 Sponsor servicing programme

Elements of the sponsor servicing programme are:

- Visit schedule: a schedule for visiting all sponsors on a regular basis: at least once every 6 months
- Secondment: for periods of typically no less than 1 year.
- Team member exchange: for periods of up to 2 months
- Visitors: for periods of up to 2 or 3 weeks
- Visits: typical duration of 1 to 2 days
- Personal contact: a personal contact to act as official liaison person for a particular sponsor. This person should maintain frequent contact by e-mail and phone with sponsor staff to poll interests, maintain a profile for ANSA results and act as a focus for technology transfer. Such a role was filled by secondees in the past.
- Adoption of prototypes built by ANSA staff
- Reviews of plans and designs drawn up by sponsors
- Electronic access by FTP and WWW: For new and existing sponsors this needs monitoring regularly to make sure that sufficient use is made of this facility and where lacking we need to follow up why this is so
- Management Committee meetings
- Technical Committee meetings
- Technology transfer plan: Maintain and update as needed

Not all elements are appropriate to all sponsors. There may be other, yet to be discovered, forms of interaction and technology transfer which could be exploited.

3.1 Bellcore

3.1.1 Recent history

Bellcore's secondees returned in September 1994.

Bellcore have taken on the MatchMaker software and use it in experiments (contact Nancy Griffith).

Bellcore consultancy days were to be used to scope out and prepare the plan for TINA consultancy which in turn is to be delivered via APM BU. In the event this was done as a separate exercise.

3.1.2 Current status

Bellcore has gone through two major reorganisations and this has changed quite a few of the contact points, many of whom have left Bellcore.

3.1.3 Planned activities

Bellcore have requested a week's worth of consultancy from RvdL in the US. Coupled with this would be several presentations on recent ANSA work. The week is tentatively planned for the week of 31/7/95.

3.2 BNR

3.2.1 Recent history

We held a workshop at BNR in January 1995. There was little follow up apart from documents on remuneration which were sent to Alastair Tocher. The workshop happened in the middle of a major reorganisation.

Consulting: GXL has been advising on high performance aspects of ORBs since then (contact John Nicol) - 10 Feb.

Technology transfer: Some joint thinking on gateways and monitoring (related to transactions) was done by YH with JPW.

3.2.2 Current status

After reorganisation, the distributed systems group at Harlow is now very small (about 5).

A new project manager has been appointed, in charge of the Distributed Systems and Interactive Multimedia Group. John Warne was asked to set up a meeting between as many of APM management and Alistair Hindman.

3.2.3 Planned activities

RvdL to follow up Alistair Hindman and to renew links.

3.3 BT

3.3.1 Recent history

Agreement has been reached on the principle of staff exchanges. A meeting was held at BT early March to introduce their team to us.

APM have provided several training courses to BT Labs staff as well as product groups. This comes officially under BU activities, but is proving valuable in that some follow up consultancy is coming our way. This helps to expand our interface into BT.

We already provided consultancy on Internationalisation in March 1995 (CMM) - (BT contact Christine Rigden).

We also provided details on distributed systems testing (CMM)

3.3.2 Current status

After RvdL contacted Steve Rudkin, BT staff exchanges are happening. Bob Briscoe is at APM from 3/6 for one week. Andrew Grace will be at APM from 23/6 for 2 weeks.

BAFC and AM are making contact regarding Web related activities. MDRB has contacts regarding BT's use of MatchMaking Services (BT wants to move it to Oracle).

CMM has a contact with Richard Swayle to provide a consultancy day on real time issues.

AJW meets with Martin French about twice a year to review OMG activities in the context of BT's interests.

3.3.3 Planned activities

CMM: press on with RT consultancy.

3.4 France Telecom

3.4.1 Recent history

There has been close cooperation in the area of ODP (standards) and the design of synchronous programming for DIMMA.

France Telecom have taken the code for Matchmaker (contact Valere Robin at Lannion, Brittany).

3.4.2 Current status

Current cooperation is centred around ReTINA.

We are in the middle of negotiating a training package (via BU). We hope it will lead to consultancy days as it did with BT.

3.4.3 Planned activities

RvdL to contact Jean-Bernard to understand needs.

3.5 GEC Marconi

3.5.1 Recent history

Part of AJH Foresight meeting effort is booked to consultancy for GEC.

Traditionally we have been able to provide Dave Thewliss with a validation service for GEC projects. DJO spent a day in Portsmouth in January (?).

In May we talked to a group from GEC-Marconi Research Centre (Chelmsford) Marconi In-Flight Systems. They are preparing an architecture for avionics. ANSA is seen as very relevant and the relationship with this group could be much more long term than what we are used to from GEC contacts.

3.5.2 Current status

Initial visit took place and we are poised to follow up with further visits and move towards workshops or training.

3.5.3 Planned activities

Sharpen up on objectives for follow up activities. RvdL to call Dave Jibb. Dave Thewliss will contact their Technical Director to cement links at management level.

3.6 GEC Plessey Telecommunications

3.6.1 Recent history

We helped perform a port of an early version of ANSAware/RT to LynxOS. GPT staff (Malcolm Vanston-Rumney) worked at ANSA over a period of three weeks (September 1994).

3.6.2 Current status

GPT are interested in our DIMMA work. They have a project on Agents which will need to be related to the work on agents in ANSA.

In June there were three separate consultancy meetings on the re-engineering of System-X in the context of distributed systems technology. DJO and AJH took part on the part of ANSA.

3.6.3 Planned activities

Follow-up on design and engineering meetings.

3.7 Hewlett Packard

3.7.1 Recent history

Contacts at multiple levels:

- AJH Foresight effort part booked as HP consultancy
- AJH/NJE visits to Bristol
- NJE visits to various HP sites in the US
- frequent HP staff visits to Cambridge UK

No need for workshops or training.

HP shadow our FTP server internally.

We have multiple champions and contacts: Bristol, Palo Alto, Chelmsford (US), etc.

Joe Sventek has taken the Trading Service (ANSAware 3.0) and adapted it to HP needs. He is interested in the Matchmaker service too.

We organised a workshop on real time ORB's (ORBlite discussion).

APM is involved in two FP IV project proposals with HP.

3.7.2 Current status

Most formal and informal contacts continue without a formal plan.

We are awaiting a decision on HP ORBlite.

NJE secondment will end in August 1995 (was July); no replacement is likely.

3.7.3 Planned activities

Without a secondee it will be necessary to plan technology transfer more carefully. Concretely this means we need to identify several champions in HP who can ensure HP remains "plugged into" ANSA. Likely champions are Paul Vickers, Joe Sventek, Peter de Jong, and Nigel Edwards.

RvdL to poll Bristol and US contacts.

3.8 ICL

3.8.1 Recent history

On numerous occasions we have provided consultancy for ICL:

- CORBA Interoperability (Fall 1994)
- JBB NTT presentation (Feb. 1995)
- OMG security document review (Feb. 1995)
- JBB OSF APC presentation (Apr. 1995).
- DMAT proposal work (BU)

3.8.2 Current status

Mike Beasley, ICL's secondee was originally to return end Feb. 1995. This was extended to end August 1995. Pending further reorganisation at ICL he remains at APM.

There exists a good relationship between the DAIS group and the ANSA team. For instance, AJW liaises with Tony Drahota, Nic Holt and John Scott on OMG issues on a frequent and regular basis.

ICL uses all its consultancy without formal planning.

3.8.3 Planned activities

Keep track of consultancy.

Take part in OMG security proposal work.

3.9 IONA Technologies Ltd.

3.9.1 Recent history

IONA have been preoccupied following up developments in OMG.

We have not tried hard enough to push technology their way.

3.9.2 Current status

IONA is poised to leave the consortium. They have however shown a keen interest in the May 1995 TC and plan to attend this.

3.9.3 Planned activities

none

3.10 Open Connexion

3.10.1 Recent history

OC was in receivership. No fees have been received for some time.

3.10.2 Current status

Shane McWhinney contacted us recently.

3.10.3 Planned activities

Await payment of fees.

3.11 Prism Technologies Ltd

3.11.1 Recent history

We have provided expertise for the TransIP project, first via JPW, then via RTOR.

3.11.2 Current status

PRISM have pulled out of the consortium.

3.11.3 Planned activities

none.