



**Poseidon House
Castle Park
Cambridge CB3 0RD
United Kingdom**

TELEPHONE:
INTERNATIONAL:
FAX:
E-MAIL:

**Cambridge (01223) 515010
+44 1223 515010
+44 1223 359779
apm@ansa.co.uk**

ANSA Phase III

ANSA MC 0795: progress report slides

Rob van der Linden

Abstract

This document contains the slides for the progress report presentation at the ANSA Management Committee meeting, 12 July 1995.

It covers the period from December 1994 to May 1995 and includes effort to date in the context of the September 1994 ANSA Phase 3 plan.

APM.1515.01

Approved

13th July 1995

Project Management (confidential to ANSA consortium for 2 years)

Distribution:

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Phase III
Progress Report
December 1994 - May 1995
to the ANSA Management Committee
12 July 1995
Mike Eyre and Rob van der Linden

- **Finance**
- **Effort and staffing**
- **Progress**
- **(Plans)**



Finance

ACTUALS	Phase 3 to date Mar. '93 - May '95	Last quarter Mar. - May. 1995
Income	2,466,976	235,643
Actual cost	2,451,978	270,105
Under/(over) spend	14,995	(34,462)



Finance 1995

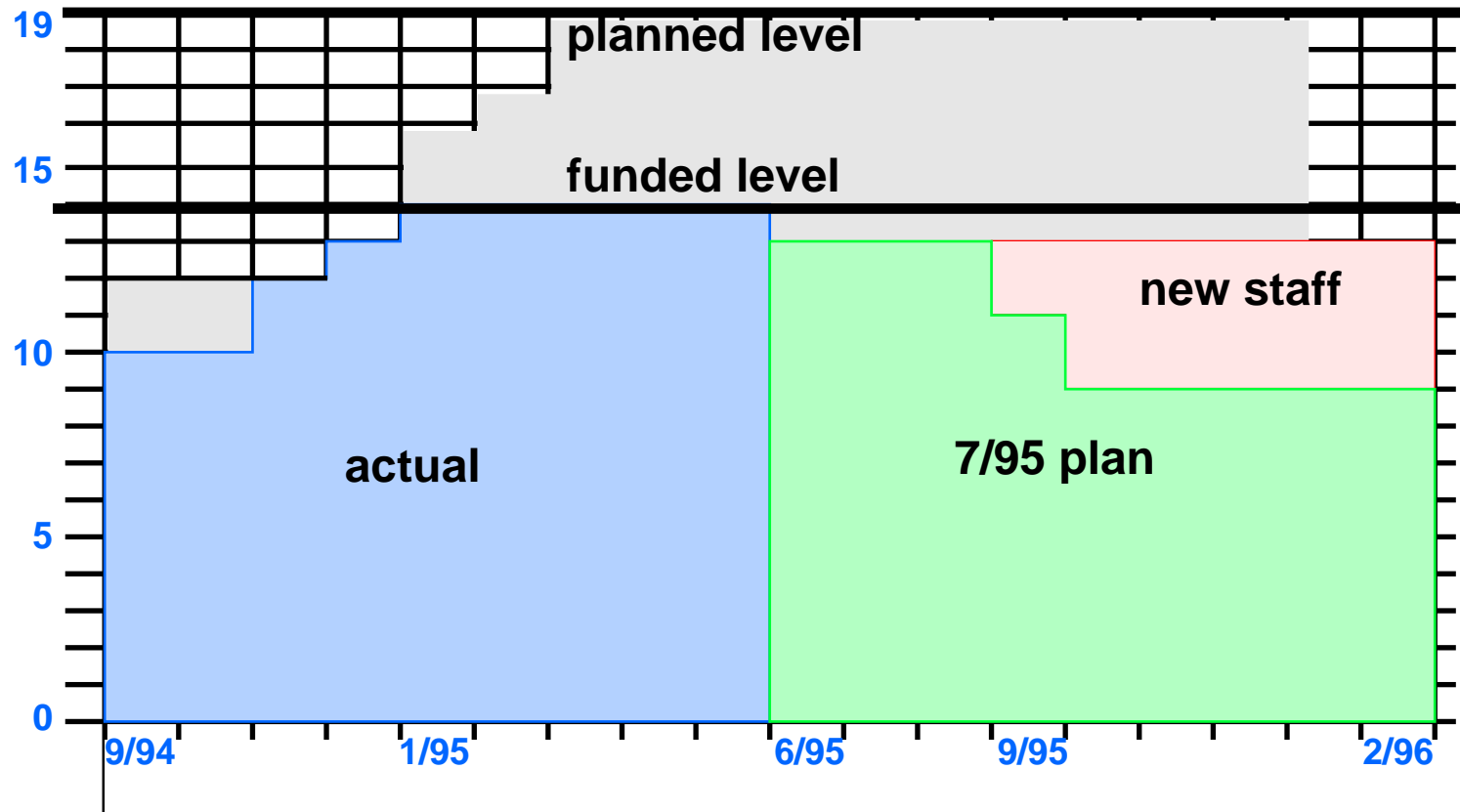
	Jan. - Dec. 1995
income hoped for	1,080
Income likely	989
cost	1,060



Effort

effort in person-months	Sept. '94 - May '95
Planned (Sept. '94)	140
Base available	115
Actual	126
	14

Staffing levels



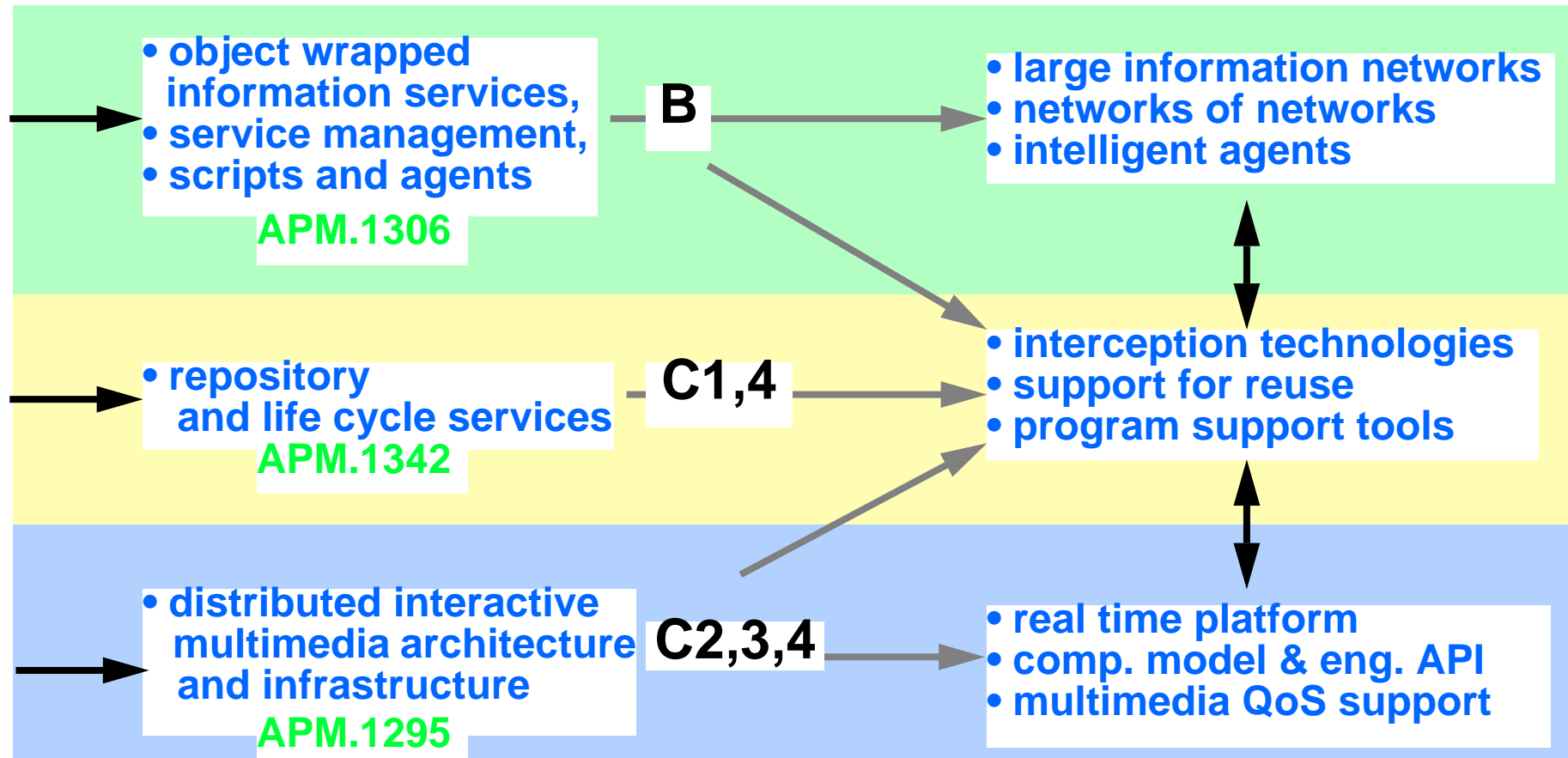


Staffing

- **Between Sept. 1994 and Jan. 1995 team grew from 10 to 14**
- **Recruitment in progress**
 - **Andre Kramer (ECRC) to join in October**
 - **seeking 2 more**
- **Losses:**
 - **2 secondees (nje back to HP; mdrb back to ICL)**
 - **gxl to BNR (to be negotiated)**

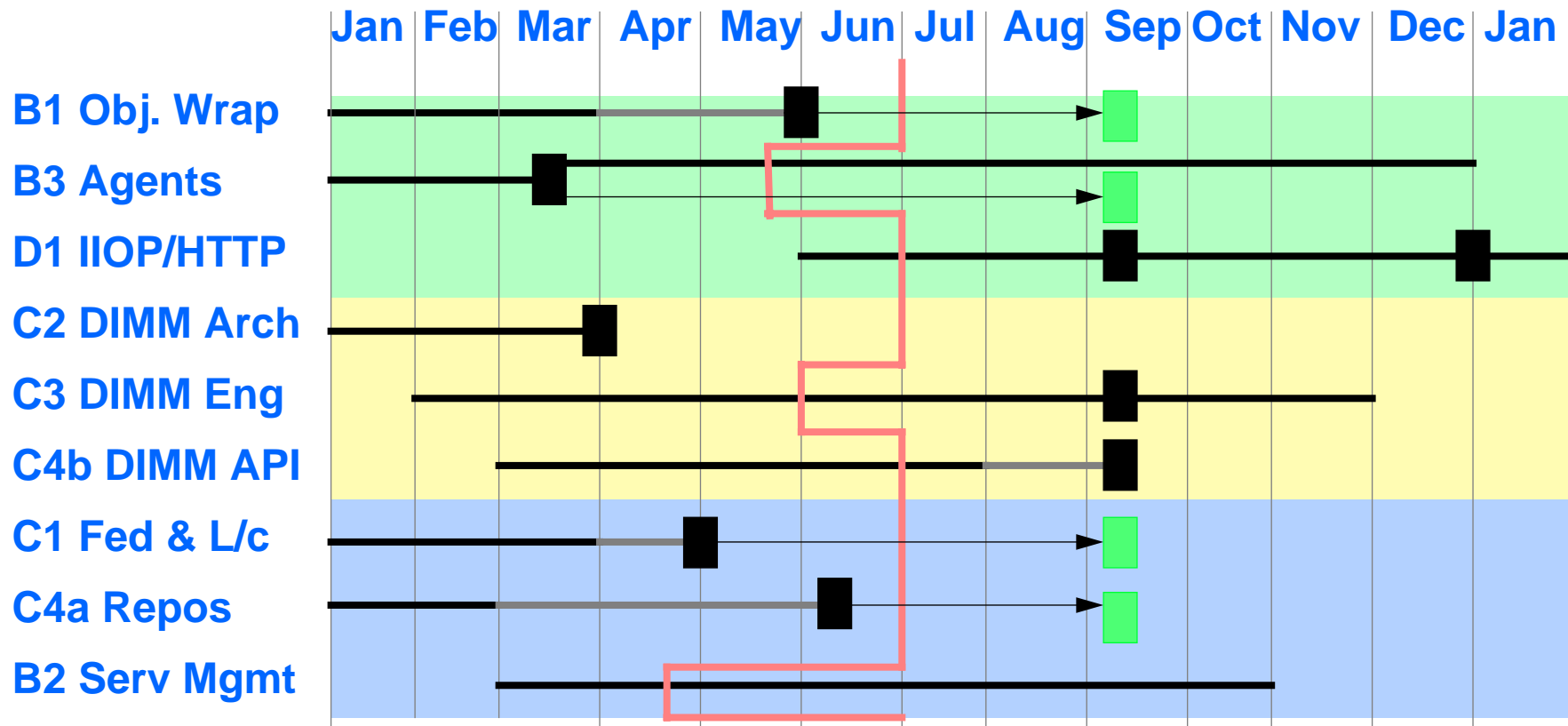


ANSA Phase 3 technical tasks (Sept. 94 plan)





Overview of progress to date (1995)





Highlights

Keeping to Schedule

SIX major deliverables completed

1	Object wrapping	ANSAweb	Code & Doc on the Web
2	Agents	Changeling	Code & Doc
3	Multimedia	DIMMA	Architecture defined
4.	Federation	Dynamic Gateways	Code & Doc
5.	Federation	AST type checker and inferencer	Code & Doc
6.	Evaluation	CORBA products	DAIS, Orbix, Orbeline, ILU

Technology Transfer

13 full weeks of “company consultancy days”
10 full weeks of “common to all” technology transfer
TINA (funded by TINA)

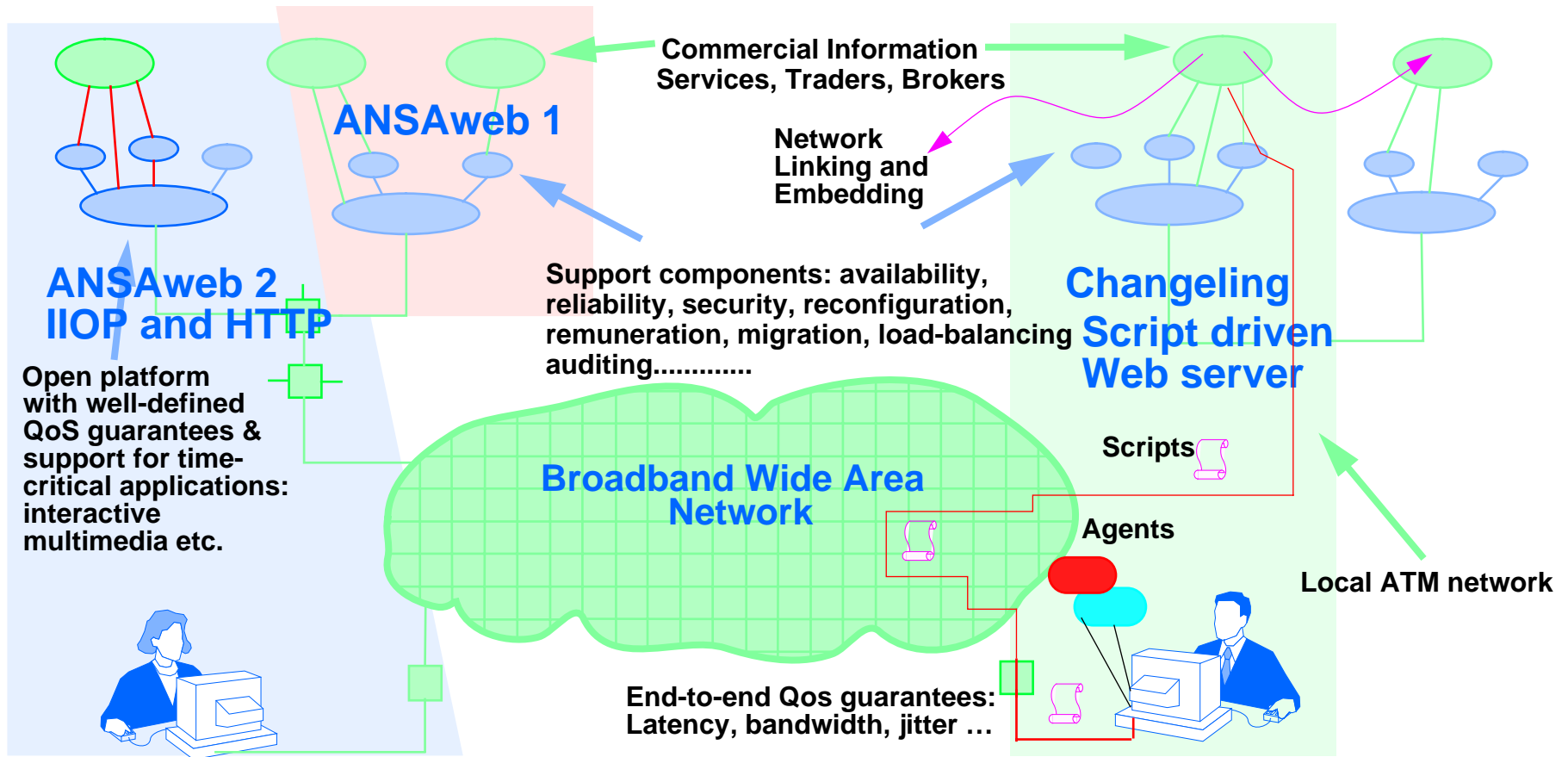
Five major deliverables in work

1	ANSAweb -2	CORBA protocols on the Web
2	DIMMA	API for multimedia
3	DIMMA	ANSAware nucleus
4.	Service Management	revised plan by TC: manage services in DIMMA and Web
5.	Evaluation	DSOM, OpenDoc, OLE, DOE.....

Standards

CORBA/2 task force	
OMG interoperability proposal accepted	11 weeks
hosted OMG meeting with ICL	
ODP RM completed	8 weeks
W3C and IETF: joined and contributed	3 weeks

Information Services Framework (ISF)





Results: Information Services Framework (ISF)

- **B1: Object Wrapping**
 - **ANSAweb: CORBA stub compiler for WWW completed (APM.1464, 1465)**
 - released interim version to Internet community 9 June 1995
 - applies distributed object systems technology to the Web
 - reduces programming effort: 10 hours for SimpleBank (500 lines of C)
 - generates program header files, stubs, and an HTML form template from CORBA IDL
 - protect investment: CORBA objects accessible from the Web
- **B3: Agents**
 - **Changeling: Script based Web server completed (APM.1453)**
 - up/down-load a script to/from a Web server for (safe) execution
 - complements the RPC model
 - supports in service upgrade

WIP: Information Services Framework (ISF)

- **D1: CORBA style computing & Web style information systems**
 - taking object wrapping (task B1) a step further
 - improve / replace Web protocols by CORBA GIOP (IIOP) to provide
 - support for sessions
 - better performance and dependability
 - client/server mobility
 - security and transaction support (more speculative)
 - introduce access and location transparency to the Web
 - the thin end of the wedge to migrate Web infrastructure to CORBA
 - enable interworking between web based applications and the “legacy”
 - code and documentation in two phases (**August and December**) to coincide with the Web conference

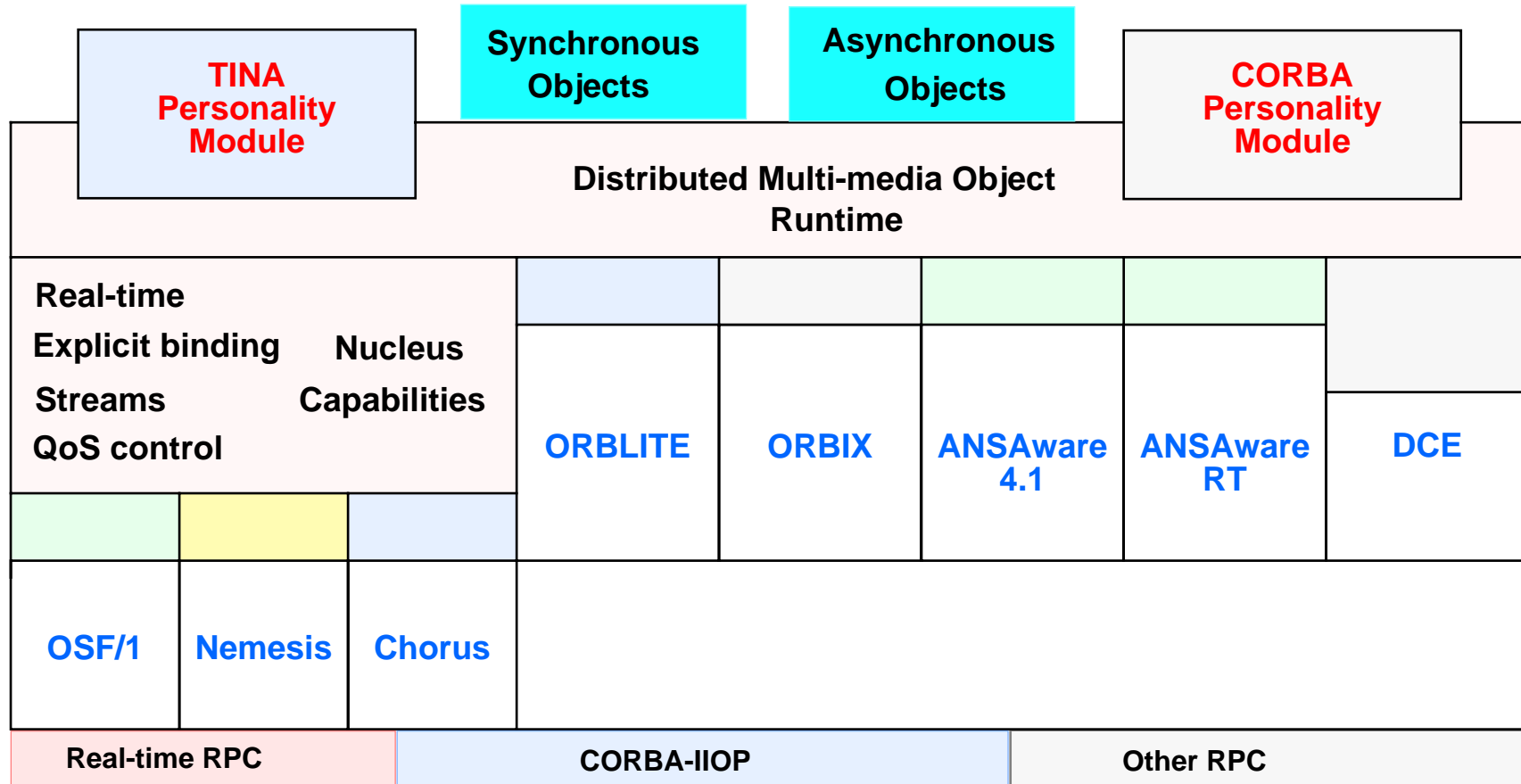


Results: Distributed Interactive Multimedia Architecture

- **C2: Architecture definition**
 - **Completed and approved ahead of schedule**
 - “Streams and signals” (APM.1393.02)
 - “Explicit binding” (APM.1392.01)
 - the basis for
 - TINA specifications for the telecommunications ORB
 - future OMG submissions in the area of Real Time ORBs
 - consistent baseline for development of prototypes



Distributed Interactive Multimedia Architecture (DIMMA)





WIP: Distributed Interactive Multimedia Architecture

- **C4b: DIMMA API**
 - ODP conforming C++ Computational API (documents & code end August)
 - IDL to C++ client and server stub compiler (doc Mid July, code mid Sept.)
 - allows programmer access to streams and explicit binding functions
 - AST approach ensures IDL and RPC independent stub compilation
 - essential for telecomms applications
- **C3 DIMMA Engineering**
 - Nucleus functions with real time, explicit binding and streams
 - first implementation mid September
 - to be delivered together with DIMMA API as the first “multi-media ready” ANSAware



Results: Federation, Repository and Life Cycle -1

- **C1: Federation and Life cycle**
 - **Model of Interception completed (APM.1427, 1507)**
 - **Trader - MatchMaker gateway completed (ANSAware - ORBIX) (APM.1303)**
 - **other dynamic gateway examples also available**
 - **dynamic gateway creation from template (upon reference passing)**
 - **provides the basis for gateway automation, reuse and management**
 - **proof of concept code available**
 - **demonstrations available**
 - **interception AR in preparation**
 - **use this as an extension to OMG GIOP (which concentrates on RPC only)**



Results: Federation, Repository and Life Cycle -2

- **C4a: Repository**
 - **AST, type checker, type inferencer completed (APM.1180, 1347)**
 - **this is a central component of tool chains for distributed computing**
 - **allows stub generation independent of
IDL
RPC
messaging protocol stack**
 - **basis for DIMMA stubgenerator**



WIP: Federation, Repository and Life Cycle

- **B2: Management Engine -> Service Management**
 - redefinition of workpackage agreed by TC and in progress
- reduce emphasis on dependability (resource constraint)
- reduce emphasis on interworking (covered by Workpackage C1)
- Increase emphasis on services (trading, factory, node management, relocation, event processing, monitoring and visualisation)
- aim at applications to test DIMMA nucleus and Web infrastructure



Technology Transfer (1)

- **Plans are being drawn up for each sponsoring company to maximise your benefit from our work**
- **New sponsor programme**
 - operates 6 - 12 months
- **Existing sponsor servicing programme**
 - 12 months and beyond
- **Documented in APM.1520**



Technology Transfer (2)

- **consultancy days (January - June 1995)**

Sponsor	Effort	Sponsor	Effort
Bellcore	plan 5	GEC	6
BNR	8.5	GPT	10
BT	3.5	HP	8
CNET	0	ICL	10
DRA	7.3	IONA	0
Eurocontrol	2	PRISM	0
Fujitsu	plan 10	Telefonica	2.5

- **“common to all” technology transfer: 50 days**



Standards

- **OMG**
 - meeting in Cambridge 27-31 March, hosted by ICL and APM
 - interoperability proposal accepted
 - C++ and Smalltalk language bindings done
 - interest in trading emerging
- **ODP**
 - RM finalised, awaiting ITU approval in Autumn plenary
 - no further effort, except occasional help on Trader standards
- **APM joined and contributed to W3C**
- **Internet Engineering Task Force (IETF) involvement**
- **X/Open and OSF**
- **Object World talks (June)**

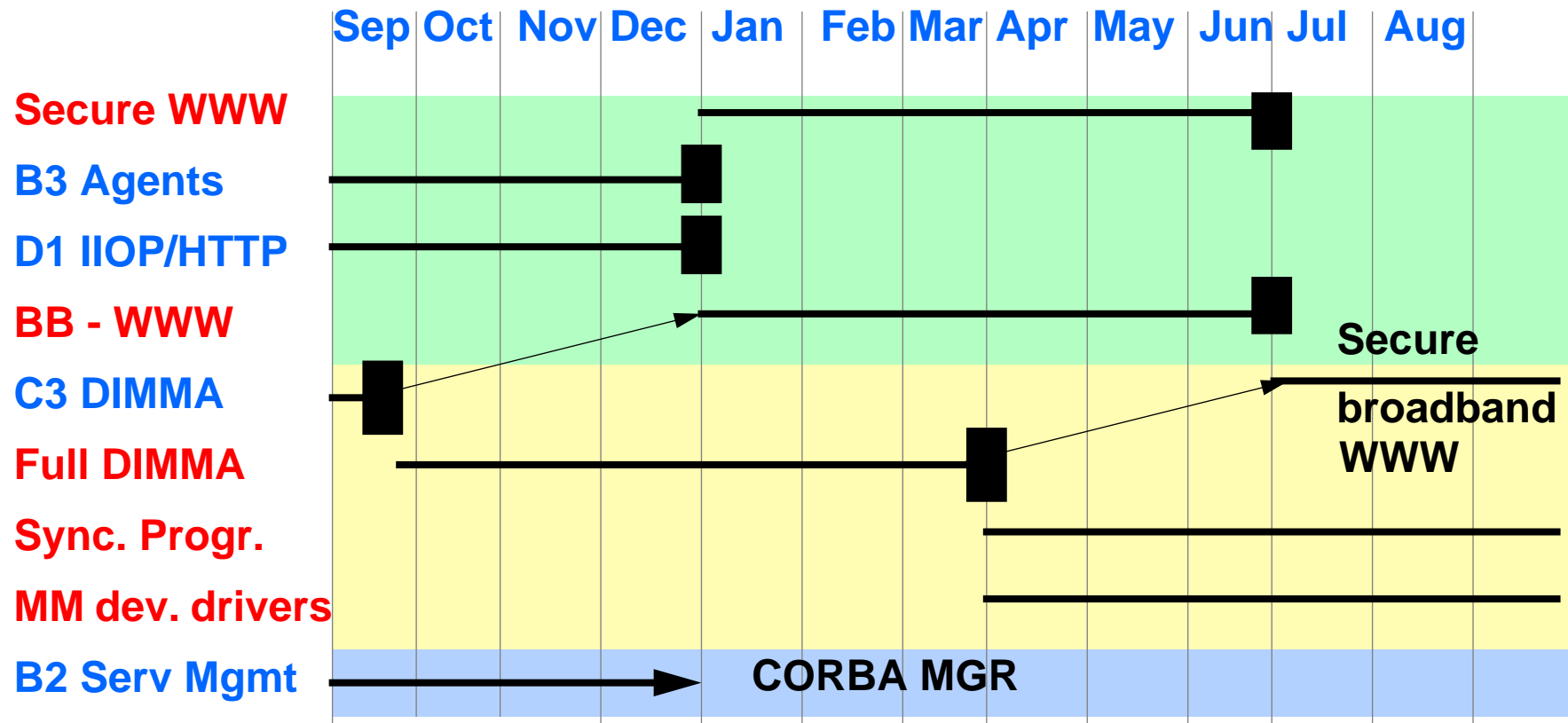


Evaluation

- **CORBA products**
 - second iteration completed (APM.1194)
 - included: ICL DAIS, IONA Orbix 1.2 and 1.3, Postmodern Computing Orbeline, Xerox ILU
 - comparison parameters being refined to include performance
- **Object models (in progress)**
 - DSOM, OpenDoc, OLE, DOE, NeXT, OMG OMA, ANSA, Dylan (Apple)...



Plans 1995 -1996 (1)





Plans (2)

- **IIOP/HTTP**
 - with first DIMMA nucleus is basis for Broadband MM Web application
 - with spin-off from ARPA and E2S projects basis for secure WWW
 - then developing into secure broadband MM web
 - followed by secure broadband MM web with QoS
- **C3: DIMMA core**
 - to be developed into full DIMMA with QoS support
 - with ReTINA spin-off basis for synchronous programming tools
 - with DCAN spin-off basis for MM device drivers and distributed switching and management
- **B2: service management**
 - to be the basis for first OL demonstrator



Plans (3)

- **Plans to be formalised and agreed at MC/TC meeting (September 1995)**