

Bulletin Informatique

JUILLET 1997

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C.E. / Direction Informatique / Unité Relations Utilisateurs et Cohérence Informatique

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Editorial

Tout d'abord quelques remarques concernant l'organigramme de notre direction.

Dans la dernière édition du Bulletin notre nouveau directeur, M. F. de ESTEBAN, a présenté quelques points majeurs de l'orientation de l'informatique à la Commission pour les mois à venir. Vous trouverez dans cette édition le message de notre nouveau directeur général M^{me} C. FLESCHE.

L'unité *Information Resource Management (IRM)* est devenue *Gestion des ressources internes (GRI)* avec comme chef d'unité M^{me} O'LEARY.

Souhaitons à M. G. GASCARD, parti à la DG 14 et remplacé pour l'instant par M. W. BEURMS, une longue et fructueuse carrière.

Sont également à noter les récentes nominations comme chef adjoint d'unité de: MM. P. BERTRAND (SSI), K. DE VRIENDT (STD) et A. BODART (CC).

Félicitations aux différents récipiendaires

Ensuite, il vous est proposé entre autre à l'approche de l'an 2000, une série d'articles en relation avec la Nouvelle Plate-forme Technologique, une enquête sur la satisfaction des utilisateurs de base de données ainsi que l'annonce de la mise en production de la version 1.3a d'EUROFORMS qui supporte le nouveau formulaire de notation.

Et pour terminer, en cette veille de vacances permettez moi de vous souhaiter, ainsi qu'à vos familles, d'agréables congés d'été.

F. ROSSA

Message du directeur général de l'informatique

Le développement de l'informatique dans la Commission

L'informatique occupe une place croissante dans les structures et procédures de grandes organisations, qu'elles appartiennent au secteur public ou privé. Il en va de même à la Commission. C'est pourquoi, la communauté informatique - la Direction Informatique avec les IRM dans les Directions générales - s'est fixée un double objectif: la simplification de l'infrastructure et le déploiement prioritaire des systèmes d'information.

Dans un avenir proche, l'infrastructure informatique reposera sur la Nouvelle Plate-forme Technologique et le réseau SNet. Ces choix répondent à une triple préoccupation:

- tenir compte des besoins des utilisateurs,
- être conforme aux tendances fondamentales du marché et prendre en compte l'évolution technologique,
- assurer la pérennité des investissements à un coût optimal.

Construits sur ce palier technologique moderne et stable, les systèmes d'information devraient connaître un développement important. Mais l'informatique ne peut jamais être qu'un instrument au service de l'homme. Et le meilleur des systèmes informatiques ne vaut que par l'usage qu'en font ses gestionnaires et ses utilisateurs.

Dans la construction de ces systèmes d'information, l'accent devra ainsi être mis sur la simplification de l'interface utilisateur et l'utilisation rationnelle de la toile, c'est-à-dire des techniques intranet.

De même une bonne communication entre utilisateurs et informaticiens est essentielle pour répondre aux défis auxquels sera confrontée l'Union européenne au cours des années à venir.

Si je compte sur la modernisation des outils techniques de gestion de l'informatique - architecture, schémas directeurs et "product management" - pour mettre en oeuvre une informatique efficace, je ne voudrais pas sous-estimer la contribution humaine. Les conclusions des groupes de travail "Overijse", les travaux du CTI et de l'IRMB, la coopération IRM/DI sont essentiels au succès de l'opération.

Colette FLESCH

ARCHITECTURE INFORMATIQUE

En attendant la disponibilité, au cours de l'été, de l'architecture informatique sur EUROPA et EUROPAplus, on peut demander une copie papier ou une version électronique auprès de M^{me} I. LOEPER tél: 32934. La version anglaise est disponible au 1er août dans le même format.

P. GARANT
DI / RUC

LES DIRECTIONS GÉNÉRALES ET LES SIC

17 juillet 97

SITE	PERSONNEL				FINANCES				LOGISTIQUES			COURRIER	EUROFORMS
	MIS	PER	CGE	FMT	FIN	ACT	CTR	FCT	INV	HD	MOB	ADNIS	
Commission :													
Cabinets (20)									O	O		O (15)	O
TFJAI												O	
I		I							O	O	O	O	O
Ia		O			I				O	O	O	O	O
Ib		R			I				O	O	O	O	I
II	O	O	I	I	E				R	E	O	I	O
III	E								O	O	O		
IV									O	E	O	O	O
V BXL		O							O	R	O	O	O
V LUX									O	I	O	O	O
VI	O	I							O	O	O		O
VII	O	E			I		I		O	I	O	R	O
VIII		O							O	E	O	I	
IX									O	O	O	R	O
X	O	O	E	R					O	O	O	D	
XI		R	I		(R)				O	O	O	O	O
XII		I			I		I		O	I	O	O	O
XIII BXL	O	R							O	O	O	O	O
XIII LUX	O	O	I			O	I		O	O	O	O	O
XIV	I	I	I						O	O	O	O	
XV	O	O	O						O	I	O	O	O
XVI		E		E					O	O	O	D	O
XVII BXL			I		I		I		O	O	O	O	E
XVII LUX	R	R							O	O			O
XVIII									O	O			O
XIX									O	O	O	O	O
XX	E	O							O	O	O		
XXI		O							O	O	O	O	O
XXII									O	O	O	O	O
XXIII	E	R							O	O		D	
XXIV		O			I				O	O		O	
AAE									O	E	O		
BS	I	I	I						O	I	O		
CDP												O	
DI	O	O	E	E		I			O	O	O	O	O
ECHO		R							O	E	O	O	O
IGS						O							O
OSCE	O	O		E	E				O	O	O		O
SCIC	E				E				O	E	O	O	O
SDT		O		E					O	O	O		O
SG	O	O			I	I			O	O	O	O	O
SJ					I				O	E	O	O	O
SPP									O	E	O		O
Agence Turin									O	I		O	O
Agence Alicante									O	I			
Agence London									O	I			
ISPRA			E										
OPOCE					I		I		O	O		D	O
Autres Institutions :													
CdJ									O				
CES									I			I	
CdR									I			O	
CdC									O	D		O	
EE									D				
TOTAL DES SITES	17	24	10	6	13	4	3	2	49	43	37	47	33

Etats des SIC: I = Intéressé; D = Demandé; E = Evaluation; R = Running-in; O = Opérationnel

ACT = Activité;
FIN = Finance;
MIS = Mission;

CGE = Congé;
FMT = Formation;
MOB = Mobilier;

CTR = Contrat;
HD = Help Desk;
PER = Personnel

FCT = Facture;
INV = Inventaire;



PRODUITS ORACLE INFO

Nouvelles contractuelles

Nous avons déjà décrit ici le contrat cadre entre Oracle et les Institutions Européennes qui couvre l'utilisation des produits et des services Oracle dans toutes les Institutions. Ce contrat prévoit l'utilisation d'une liste des produits standard composée: du kernel de la base (serveur Oracle RDBMS), du SQL*Plus, et du middleware (SQL*Net, ODBC driver et Oracle Objects for OLE).

Maintenant cette liste a été élargie avec deux nouveaux produits:

- Enterprise Manager Performance Pack. Il s'agit d'un outil destiné à faciliter le travail de tuning et d'administration des configurations Oracle, donc à utiliser par un DBA
- le Web application Server.

Pour plus d'information sur ce point contacter:
J. MARÍN (tél. 34531)
ou R. RUIZ (tél.32141)

Oracle 8

Oracle annonce la disponibilité de la version Oracle 8 sur diverses plates-formes (NT, SUN, HP, DEC ...). Les nouvelles fonctionnalités sont orientées, principalement, sur deux aspects:

- L'augmentation de la performance et la "scalability" (support de plus d'utilisateurs concurrents et on parle déjà de terabytes de données) par rapport à la version actuelle
- L'intégration des concepts relationnel et objet.

Presque en même temps, Oracle a annoncé l'arrêt sans date de la commercialisation de Sedona, l'environnement associé à Oracle 8 pour

le développement orienté objet. Sans doute, ce fait va rendre difficile et/ou retarder l'utilisation des possibilités objet d'Oracle 8.

Les analystes ont bien reçu cette annonce qui consolide Oracle en tant que leader du marché RDBMS. Le Gartner Group dit: " Oracle is reinforcing its current reputation as the market leader offering a decent mix of innovation and pragmatism" et "object oriented features are a little muddled"

Que va faire la DI?

Tout d'abord recommander la prudence et attendre que la version se consolide, organiser (en collaboration avec Oracle) des séminaires (déjà en septembre) pour faire connaître les fonctionnalités de la nouvelle version, et mettre en place un projet inter-DG afin d'étudier les nouveaux aspects, évaluer l'impact de la migration et éventuellement proposer un plan de migration. En fait, il s'agit de répéter le même processus (qui a bien fonctionné) lors de l'apparition de la version 7.

Pour plus d'information sur ce point contacter:
J. MARÍN (tél. 34531)
ou R. RUIZ (tél.32141)

SQL*Net

Dans le cadre de la mise en route de la nouvelle plate-forme technologique (WIN NT WS est l'orientation à terme et la plate-forme préférée pour le multilinguisme) il faut disposer d'un environnement 16 bit (destiné à la compatibilité avec la version Win 3.1 16 bit) et d'un environnement 32 bit. Du point de vue de l'installation de SQL*Net il faut donc une version 16 bits et une version 32 bit pour prévoir l'accès des applications 16 bit et 32 bit.

Les installations qui visent à utiliser le character set AL24UTFFSS (UTF8 Unicode) dans la base de données ont besoin d'utiliser SQL*Net 2.3.

Les versions actuellement recommandées sont les suivantes:

	Environnement	Dernier script disponible dans Softline	Commentaires
SQL*Net2.1.0.4	16 bit (Windows 3.1 et 95)	SQLN2104C.EXE	Ce script intègre le "patch" qui corrige le problème de mémoire conventionnelle
SQL*Net 2.3	32 bit (Windows 95 et NT)	SN23232b.EXE	Inclus les DLL des versions 2.2, le driver ODBC 2.0 d'Oracle et path de correction "outer join"
SQL*Net 2.3	16 bit (Windows 3.1, 95 et NT)	SN23216b.EXE	Inclus les DLL des versions 1.7, 2.0, 2.1 et 2.2 et le driver ODBC 1.16 d'Oracle

Pour plus d'information contacter: G. JOULAIN (tél. 33783) ou M. DOMINICI (tél. 33714)

PRODUITS MICROSOFT INFO

Access 97

L'adoption de la suite Office 97 en tant qu'environnement bureautique pour la nouvelle plate-forme entraîne aussi la recommandation d'utiliser Access 97 (ou Access 8) et ne pas considérer l'utilisation d'Access 95 (Access 7). L'évaluation d'Access 97 (y inclus l'impact de la migration depuis Access 2) est en cours à la DI (fin prévue pour septembre) ainsi que la préparation d'un script d'installation "silencieux" (donc, utilisable via Netcon) pour l'environnement de développement qui sera disponible dans la configuration NTP

Pour plus d'information sur ce point contacter:
P. A. DAMAS (tél. 33497)
ou J. MARÍN (tél. 34531)

PRODUITS POWERSOFT INFO

Versions PowerBuilder recommandées

Suite à la disponibilité des nouvelles "fixes" PB4.0.07 (dernière version 4) et PB5.0.03 nos recommandations sur l'utilisation de PowerBuilder sont les suivantes:

- PowerBuilder 4 (seulement 16 bit, toutes plate-formes): Utiliser la version 4.0.05

(script pb405rtc dans Softline). Un script (pb40716a) sera préparé pour la version 4.0.07 mais il devra être utilisé seulement en cas d'anomalie

- PowerBuilder 5 (16 bit, seulement Win 3.1): Utiliser la version PB 5.0.03 (script pb50331a en préparation, disponibilité septembre). DISTB dispose d'un script pb50231b pour la version PB5.0.02 qui peut être utilisé en cas d'urgence pour déployer ou installer une application PB5
- PowerBuilder 5 (32 bit, Win NT, Win 95): Utiliser la version PB 5.0.03 (script pb50332a en préparation, disponibilité septembre). DISTB dispose d'un script pb50232b pour la version PB5.0.02 qui peut être utilisé en cas d'urgence pour déployer ou installer une application PB5

Il y a lieu à rappeler qu'une application compilée avec une version inférieure (p.e. 4.0.01) fonctionne dans le run-time d'une version supérieure (p.e. 4.0.05) sans avoir à la recompiler. Entre les versions 4 et 5 il faut prévoir une migration

Pour l'environnement de développement nous recommandons d'utiliser les versions équivalentes (PB4.0.05 et PB5.0.03)

Pour plus d'information sur ce point contacter:
G. JOULAIN (tél. 33783)
ou P. A. DAMAS (tél. 33497)

Evaluation des librairies des classes PowerBuilder

Dans le BI précédent nous avons parlé d'un projet d'évaluation des librairies des classes PowerBuilder. Cette évaluation a pour but d'étudier la situation actuelle des librairies sur le marché suite à la disponibilité des PFC dans PB5 (PowerBuilder Foundations Class) et éventuellement en sélectionner une.

Un rapport d'évaluation devrait être terminé fin juillet. Ce que l'on peut avancer est que l'impact sur le marché au niveau produit des PFC a été très limité, en fait il y a seulement une librairie (Cornerstone) basée dans les PFC. A signaler que d'autres outils d'aide à l'utilisation des PFC sont apparus (p.e. Object*Composer). Par contre, l'aspect positif des PFC a été que la bonne façon de développer avec PowerBuilder s'est consolidée (Orientation objet et service model based architecture).

Pour plus d'information sur ce point contacter:
Mme LIMBOS (tél.56883)
ou J. Marín (tél. 34531)

PowerDesigner 6.0

S*Designor a été renommé par Powersoft. La nouvelle version 6.0 de PowerDesigner en production aura deux éditions:

- PowerDesigner DataArchitect Suite, l'ancienne version S*Designor Suite avec les modules suivants: DataArchitect (data modelling), AppModeler (génération PB, VB, ..), ProcessAnalyst (process modelling), ModelViewer et MetaWorks (repository)
- PowerDesigner WareHouseArchitect Suite qui comprend les mêmes modules que la version "DataArchitect suite" plus un module Warehouse Architect contenant des fonctionnalités pour le DataWareHouse

Dès mise à disposition de la version 6, DI-STB fera une évaluation.

Pour plus d'information sur ce point contacter:
J. MARÍN (tél.34531)
ou R. RUIZ (tél. 32141)

DIVERS

Contributions Bulletin Informatique

Vous trouverez dans ce Bulletin, en plus de cet Info-STB, les contributions suivantes élaborés à la section Outils de Développement et qui présentent un réel intérêt (nous en sommes convaincus !!!) pour les personnes concernés par le développement:

- Migrating 16-bits applications for the NTP platform
- Building independent clients with SQL*Net version 2
- The Internet: Revolution or Evolution
- Validation Tools for Reference Configuration
- NTP project newsgroup

Guides de style et guides de développement

Les versions finales des guides suivants sont disponibles:

- Style guide for developping Windows 95 user Interface (doc. STB/OD(96)5, 6 et 7)
- PowerBuilder 5 Application Development Guide (doc. STB/OD(96)12)
- Visual Basic 4.0 Application Development Guide (doc. STB/OD(96)13)

Vous pouvez vous les procurer au Forum Informatique (Bruxelles et Luxembourg). Tous commentaires, critiques, suggestions, corrections ...sont les bienvenus!

Pour plus d'information sur ce point contacter:
P. A. DAMAS (tél. 33497)
ou J. MARÍN (tél.34531)



1. PLATES-FORMES

	Systèmes d'exploit.	Disponibilité ON-LINE %		Charge (TINS)		
		Mai 97	1° trim. 97	Mai 97	Juin 96 à Mai 97	Moyenne mensuelle
AMDAHL	MVS	100,00	100,00	164,71	1.715,70	142,98
	VM	100,00	100,00	35,78	577,32	48,11
	PRODCRAY	-	-	303,23	1.562,66	312,53
BULL	GCOS8	98,87	99,88	7,82	84,44	7,04
	DPX20	100,00	100,00	19,23	124,53	10,38
DIGITAL	SINCOM A	-	-	8,51	61,16	12,23
	SINCOM D	-	-	50,46	158,60	31,72
	SINCOM T	-	-	59,41	213,79	42,76
ICL	OSLUX1	-	-	65,31	598,58	74,82
	OSLUX2	-	-	27,99	215,56	26,94
SNI	BS2000	100,00	100,00	19,86	268,35	22,36
	NILE1	95,56	98,89	86,39	730,79	91,35
	NILE2	98,21	99,45	71,96	427,15	53,39
TOTAL		98,95	99,75	920,64	6.738,63	876,61

2. SYSTEMES D'INFORMATIONS

Systèmes d'information	Systèmes	Consom. Mai. 97	Juin 96 à Mai 97*	Moyenne mensuelle	1° trim. 96	1° trim. 97
COMEXT	PRODCRAY	180,01	1.170,60	234,12	*	666,41
DOCSEVER	NILE1	69,23	415,76	51,97	*	148,47
EUROFARM	MVS	66,88	553,37	46,11	59,64	140,02
SINCOM	MVS	66,47	810,02	67,50	177,29	243,67
NAP	NILE2	65,97	398,94	49,87	*	165,53
NEWCRON	PRODCRAY	64,92	200,82	40,16	*	105,50
WINSUIVI	NOSLUX1	64,32	583,58	72,95	*	245,44
SINCOM	SINCOM T	59,41	213,79	42,76	*	89,89
SINCOM	PRODCRAY	58,29	77,17	15,43	*	0,04
SINCOM	SINCOM D	50,46	158,60	31,72	*	62,27
RAPID	OSLUX2	27,99	215,56	26,95	*	64,89
SYSLING	MVS	24,05	218,36	18,20	55,41	49,71
MULTILIS	DPX 20	19,18	99,04	8,25	*	31,49
EURAMIS	NILE1	16,22	288,52	36,07	*	140,65
IRENE	VM	14,52	146,11	12,18	31,47	38,50
SINCOM	SINCOM A	8,51	61,16	12,23	*	44,92
CELEX	GCOS8	6,23	63,93	5,33	12,08	17,85
APPOLREG	VM	6,00	91,09	7,59	23,29	24,98
CRON.SEC1	VM	4,84	103,08	8,59	34,74	32,14
SYSPER	BS2000	4,78	77,57	6,46	21,24	18,61
Autres applications		42,38	791,55	82,17	254,39	256,74
Total		920,64	6.738,62	876,61	669,55	2.587,72

* Disponibilité des chiffres depuis :

oct-96 pour les plateformes NILE1, NILE2, NOSLUX1 et OSLUX2

janv-97 pour les plateformes PRODCRAY, SINCOM-A, SINCOM-D et SINCOM-T

**3. Charge (en TINS) par DG TITULAIRES des systèmes d'information**

DG Titulaires	Consom. Mai 97	Juin 96 à Mai 97	Moy. 12 dern. mois	1° trim. 96	1° trim. 97
EUROSTAT	328,51	2.304,91	192,08	257,33	1.002,56
DG XIX	243,22	1.333,75	111,15	177,37	447,87
SDT	176,43	1.546,34	128,86	59,70	590,73
DG XVI	71,97	490,15	40,85	23,33	190,57
SPP	28,08	235,51	19,63	0,11	67,52
DG X	20,30	115,81	9,65	0,46	41,04
DG IX	19,05	208,12	17,34	49,88	58,31
SG	16,28	168,82	14,07	37,42	44,66
OPOCE	6,24	68,02	5,67	12,08	18,33
DG VII	2,97	61,09	5,09	25,86	11,21
DG XVII	2,47	11,43	0,95	2,49	3,10
DI	1,92	32,90	2,74	11,67	8,34
DG XVIII	1,87	26,12	2,18	6,34	6,50
DG VI	0,74	11,15	0,93	1,12	2,01
DG IV	0,48	6,38	0,53	2,13	1,81
CDC	0,10	1,03	0,09	0,27	0,29
DG III	0,01	115,00	9,58	0,76	92,62
DG II	0,00	0,05	0,00	0,05	0,01
DG I	0,00	1,24	0,10	1,19	0,02
DG XX	0,00	0,00	0,00	0,00	0,00
Autres DG		0,81	0,07	0,01	0,23
Total	920,64	6.738,63	561,55	669,55	2.587,72

"at 1 Jan 2000" :

Error - Bad year

On 1 January 2000, many of us are going to wake up, probably rather later than usual, to find that our computers have stopped working ... 1 January is a Saturday though, so you might not realise that anything is wrong for a couple of days.

But in fact, you will probably already have had some indication that things aren't quite right on the way home from the revelries of the previous night when you get stuck in the lift, your car fails to start and, when you do eventually get it going, you find yourself in an unprecedented gridlock in town after all of the traffic signals have failed. You'll probably be able to live with the fact that your video didn't record your favourite TV program. You might be a little more concerned if you're in Intensive Care and your Heart and Lung machine suddenly decides to start pumping in reverse.

Exaggeration? Well, yes ... probably. However, one thing is for sure and that is that some of the devices that we have come to rely on will have problems on 1 January 2000. There will be an apocalypse - even if it's only a very small one!

So what is this year 2000 (Y2K) problem, otherwise (inaccurately - *The first day of the first millennium was 1 January 1, there was no year 0 - so the first day of the third millennium will be 1 January 2001 and not 1 January 2000*) called the "Millennium Bomb"?

It's a software problem because software programmers sometimes make mistakes. Many programs are written using just two digits to represent the year so when we move from 99 to 00, are we going back in time? 00 is also "nothing" - how do programs logically represent "nothingness"?

There is a well known example of a Y2K problem having already occurred. The computer in a State Penitentiary in the USA instructed the guards to release some prisoners 15 years early because the current year, '96, was "later" than the year of their release date, '11.

A recent Gartner Group report estimated that there are something like 3 billion "intelligent" devices in the world, i.e. devices containing microprocessors which are running software programs. These devices range, for example, from micro-code running on tiny chips in watches through more sophisticated devices controlling car engines (and missile navigation systems) all the way to high-level 5th generation programming languages running on supercomputers in Air Traffic Control centres (and hospitals, nuclear power stations, military headquarters, ...) Probably the majority of these devices are programmed to have some concept of time. Any program or device that handles time is potentially vulnerable to the Y2K problem.

Are we going to check all 3 billion of these devices for Y2K compliance? Or just the ones that we consider important?

Y2K simulation at DG21

During March of this year, one of DG21's database servers, XXI-ACC, was taken out of normal operations (it is the acceptance-test system) and rebooted with the date set to Friday 31 December, 1999. The system was left to run for seven days simulating the turn of the year and the first week of the year 2000.

Prior to the boot, XXI-ACC had been setup to be an almost exact copy of DG21's production

database server, XXI-PROD, with the same applications (running sample data), the same software and very similar hardware.

The main purpose of this exercise was to heighten the awareness of DG21 staff regarding potential Y2K problems with the applications they are responsible for. These amount to some 16 applications running in five Oracle database instances. Some of these applications are large, strategic, operational (Member States customs and tax offices use them daily) and with a legal basis under Commission directives.

In addition, the simulation would also allow the LSA and DBA teams to check the correct functioning of the Unix OS and the Oracle7 RDBMS.

Below is a summary of the major findings from the simulation.

UNIX

The XXI-ACC and XXI-PROD servers run the Pyramid DC/OSx operating system which is Unix System V Release 4 compliant.

The Unix kernel has a relative notion of time, represented by the number of seconds since the "epoch" of Unix (00:00:00 on 1 January 1970). So, moving from 946,677,600 (midnight on 31 December 1999) to 946,677,601 (the first second of the year 2000) does not cause any problem.

On top of the Unix kernel, however, there are hundreds of Unix commands. Each of these commands is a program and therefore potentially vulnerable to the Y2K problem.

Many Unix commands were tested and the only problem encountered was with the at job scheduler. Trying to run a command "at 1 January 2000", "at 1/1/00", or "at 18:00 today" all failed with the error message "Bad year"! Pyramid have been notified of the problem which they say they were already aware of and which will be fixed in a future Y2K-compliant release of the operating system which is due in 1998.

SYSTEM SERVICES

Several system services such as communications software (X.25), OLTP software (Tuxedo), network backup software (Alexandria), etc. were also tested and no problems were found with any of them except one.

The exception was the Alexandria backup scheduler which aborted as it was unable to handle the year 00. The suppliers have been notified of the problem and again they say they were aware of the problem and that it will be fixed in a future Y2K compliant release of the software.

ORACLE

The XXI-ACC and XXI-PROD servers both run Oracle versions V7.3.2 and V7.0.16.

Internally, Oracle represents the date as DD-MON-YYYY so there is, for example, no problem to distinguish between 01-JAN-1900 and 01-JAN-2000. However, most applications (certainly within DG21) use the default NLS_DATE_FORMAT parameter of DD-MON-YY for entering dates. This allows users to enter abbreviated dates such as 19-JUN-97 which are stored internally as 19-JUN-1997.

Before the turn of the century, using the default NLS_DATE_FORMAT parameter, 31-DEC-99 would be stored correctly as 31-DEC-1999 but 01-JAN-00 would be stored incorrectly as 01-JAN-1900. After the turn of the century, 31-DEC-99 would be stored incorrectly as 31-DEC-2099 while 01-JAN-00 would be stored correctly as 01-JAN-2000. That is, Oracle's default ranges for the DD-MON-YY format are 1900 to 1999 (for dates entered this century) and 2000 to 2099 (for dates entered in the next century).

To overcome this problem, Oracle have introduced an alternative NLS_DATE_FORMAT parameter, DD-MON-RR, which is suitable for correctly entering dates between 1950 and 2049. Both now and after the turn of the century, 31-DEC-99 would be stored correctly as 31-DEC-1999 and 01-JAN-00 as 01-JAN-2000.

There are, however, some problems with the DD-MON-RR format.

Firstly, the format is not fully supported in Oracle versions prior to V7.3.2.3. Although it works correctly if set using an ALTER SESSION statement, it does not work if it is set in the Oracle initialisation (init.ora) file. This implies that all applications using older versions of Oracle will need to be migrated to a higher version by the turn of the century.

Secondly, applications that use the character string CHAR or VARCHAR2 data types to represent the date will obviously not benefit from the DD-MON-RR format. These applications will have to be converted to utilise the Oracle DATE data type.

Finally, there is no current guarantee that the API's of third party products such as PowerBuilder, Visual Basic, Tuxedo, ODBC, etc. will recognise the DD-MON-RR format.

All Oracle tools are Y2K compliant with the exception of: SQL*Forms V3, SQL*Menu V5 and SQL*ReportWriter V1 which are still used by a number of applications in DG21. Oracle Belgium have provided a workaround to make these tools Y2K compliant and this workaround has been distributed to DG21 development teams. All DG21 applications (with the exception of one) will, in any case, probably be rewritten using alternative tools before the end of the century. At any rate, Oracle support for these tools will cease before the year 2000.

DATABASE APPLICATIONS

Nine of the 16 applications running in production on XXI-PROD and in Y2K simulation on XXI-ACC were tested, to a greater or lesser degree, for Y2K compliance. The remaining seven applications were not tested either because the application will be phased out before the turn of the century or due to lack of human resources.

Here is a collection of some of the Y2K problems that were encountered with DG21 applications. These should give a taste of the type of problem that can be expected:

- Dates are stored incorrectly I: 2099 instead of 1999.
- Dates are stored incorrectly II: 19100 instead of 2000.
- The value 00 is not accepted - the application behaves as if the field were empty.
- In the date window, it is impossible to scroll from 01-JAN-00 back to 31-DEC-99.
- Records with a value 0 for the year are not accepted by the user interface.
- The automatic numbering of records no longer works correctly.
- The purge of outdated files no longer works.
- Because the SQL MAX function is used, the incorrect date is returned.
- Defining a period with a start date of DD-MON-99 and end date of DD-MON-00 fails ("Error: the end date cannot be before the start date").
- The date 29-FEB-00 is not accepted by the application.

One application deserves special mention. Although it is due to be phased out next year, it contains data that may need to be referenced sometime in the future. In extreme circumstances it may even be necessary to put the application back into production, even after the turn of the century.

Although the application is running on Oracle V7.0.16 and uses SQL*Forms V3 and SQL*Menu V5, all of which will not be supported by Oracle in the future, this is not considered as a blocking problem in getting the application running again.

What is a problem is that these versions are not Y2K compliant and the V7.0.16 RDBMS will never support the DD-MON-RR format. It will therefore be necessary to either:

- rewrite the application to be able to handle the YYYY date format and continue to use the existing versions of the RDBMS and SQL tools, or,
- migrate the application to SQL tools which are Y2K compliant and to a version of the RDBMS that supports the DD-MON-RR format.

In either case, this will mean an investment in an application which, in normal circumstances, will already have been phased out.

Conclusion

The simulation, which was the second phase of a longer evaluation exercise, was considered a success in that it was very valuable in increasing awareness within both DG21 Development teams and within the Operations Support team of potential Y2K problems.

Because the simulation was simple to perform, it will be straightforward to repeat at regular intervals so that we will be able to test fixes to known Y2K problems, test new DG21 applications, test new releases of existing DG21 applications, test solutions like the DD-MON-RR format (especially with regard to third party software), and so on.

It has also been proposed that a member of the DG21 staff is given the responsibility of coordinating Y2K issues between Operations Support, Development teams, the Project Support Office, the Informatics Directorate and external software suppliers.

Contingency plans will also be needed for all applications in case they fail on January 1 2000. Contractual obligations and responsibilities will need to be defined well in advance of the turn of the century so that Development teams and their suppliers are well aware that they are responsible for the correct functioning of their applications. This may even require certification of Y2K compliance. Operations Support, will remain responsible for the correct functioning of operating systems, system services and the Oracle RDBMS.

Final Word

To make matters worse, the year 2000 is also a leap year. Leap years occur every 4 years with the exception of the first year of a new century. The exception to this exception is that the first year of every fourth century is a leap year. The year 2000 is such an exceptional exception. If your software works on 1 January 2000 will it also work on 29 February 2000?

Any other dates to look out for? Well, even before we get to the turn of the century we will have to contend with 9 September 1999 - will

some older programs read 9-9-99 as an end-of-input? And then later, if you're still around in 2038,

Unix will finally "run out of time" having used up its 32-bits of seconds since 1 January 1970!

One thing is for sure, you won't find me on a plane on 1 January 2000 or 29 February (or Friday 13 October for that matter) - I'll be tucked away in my isolated cottage on a remote stretch of the Yorkshire coast with all the electricity turned off!

Anthony RAW
DG XXI

Happy New Millennium!

Projet

Next Technological Platform (NTP)

L'informatique est devenue un outil de travail indispensable au service, aussi bien des politiques communautaires, des procédures opérationnelles de notre organisation, que de la productivité individuelle des fonctionnaires et autres agents de notre institution. Les demandes, en nombre croissant, de développement de nouveaux systèmes d'information ou, au niveau individuel, d'intégration de logiciels bureautiques, en sont les meilleurs témoins.

La plate-forme PC actuelle, basée sur le système d'exploitation Windows 3.1, date maintenant de 10 ans. Ses faiblesses et limitations sont mises en lumière par les exigences accrues de fiabilité et de productivité, deux notions essentielles à l'approche de l'an 2000. L'arrivée sur le devant de la scène d'une nouvelle technologie, qui répond mieux aux besoins d'une grande organisation comme la nôtre, a incité l'Information Resources Management Board (IRMB)¹ à mener à bien un projet de renouvellement de la plate-forme technologique (projet NTP = Next Technological Platform).

Ainsi, une nouvelle plate-forme (baptisée NTP) a été constituée. Elle est basée sur le système d'exploitation Windows NT, qui doit être installé sur les serveurs et sur les PC.

Cette nouvelle plate-forme assurera les services déjà couverts par la précédente et marque une étape importante dans la simplification de l'infrastructure informatique.

Ses points forts sont: une bonne stabilité, une interface plus conviviale, une sécurité accrue, des capacités multilingues poussées, une réduction des coûts de gestion et une meilleure intégration entre les applications, la bureautique et les télécommunications.

De plus, la dernière version des logiciels habituels de notre bureautique sera intégrée (Office 97 qui comprend, entre autres, le traitement de textes WORD et le tableur EXCEL). Son déploiement, qui s'étalera de septembre 1997 à décembre 1998, sera défini selon un plan à établir par chaque Direction générale/Service. Votre Information Resources Manager (IRM) vous informera de la planification adoptée dans votre Direction générale / Service et du déroulement de l'opération dans votre service.

Le déploiement, réalisé par les équipes locales, sera coordonné par la Direction Informatique et accompagné d'une formation spécifique du personnel, d'un renforcement temporaire des moyens dont dispose le support (central et local) et d'un remplacement des PC obsolètes.

Je fais appel à votre collaboration pour que cette opération majeure soit une réussite, qui établira une nouvelle base de l'informatique à la Commission et qui sera apte à relever le défi des années à venir.

F. de ESTEBAN

¹ IRMB: Comité de 8 Directeurs généraux qui, sous la présidence du secrétaire général, définit les orientations stratégiques de l'informatique à la Commission et alloue les ressources correspondantes.

NTP newsgroup

In the context of the New Technological Platform project, we have set up a News server, allowing a direct communication between the different project members.

Several News Groups have been created to separate information depending on the subject.

You will find the following groups:

cec.di.ntp-project.NTPSetup	installation, migration problems
cec.di.ntp-project.Client.Windows95	Windows 95 questions
cec.di.ntp-project.Client.WindowsNT	NT Workstation questions
cec.di.ntp-project.Server.WindowsNT	NT Server, domains, groups, ...
cec.di.ntp-project.Network	NFS Connectivity, Lanman, TCP/IP, ...
cec.di.ntp-project.Development	32-bit development issues
cec.di.ntp-project.Utills	Utilities, Tools, Configuration validation
cec.di.ntp-project.Misc	Miscellaneous

You will find hereafter a document describing how to configure Netscape for News Group access.

How to connect to the NTP Project Newsgroup?

Configure Netscape for Newsgroup access

- Activate in the menu Options the item Mail and News Preferences
- Choose the Servers tab

The screenshot shows the 'Preferences' dialog box with the 'Servers' tab selected. The 'Mail' section has the following fields: 'Outgoing Mail (SMTP) Server' with 'www.cc.cec', 'Incoming Mail (POP) Server' which is empty, 'Pop User Name' with 'pierre.damas', 'Mail Directory' with 'C:\Program Files\Netscape\Navigator\mail', and 'Maximum Message Size' set to 'None'. Below these are options for 'Messages are copied from the server to the local disk, then' with 'Removed from the server' selected. The 'Check for Mail' section is set to 'Every 10 minutes'. The 'News' section has 'News (NNTP) Server' with 'www.cc.cec', 'News Directory' with 'C:\Program Files\Netscape\Navigator\news', and 'Get' set to '100 Messages at a Time (Max 3500)'. Buttons for 'OK', 'Cancel', and 'Help' are at the bottom.

- In the Outgoing Mail Server field, enter www.cc.cec
- Leave the Incoming Mail Server field blank (Give your Route400 address to external correspondents)
- In the Pop User Name field, enter your name as it is in your internet address (e.g. pierre.damas)
- In the News Server field, enter www.cc.cec

■ Choose the Identity tab

The screenshot shows the 'Preferences' dialog box with the 'Identity' tab selected. The dialog has a title bar with a close button. Below the title bar are tabs for 'Appearance', 'Composition', 'Servers', 'Identity', and 'Organization'. The 'Identity' tab contains the following fields:

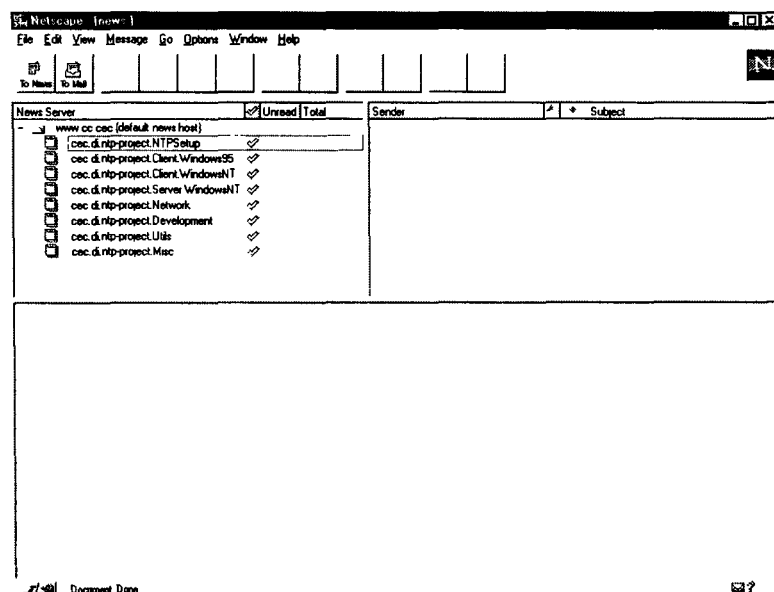
- Tell us about yourself**: This information is used to identify you in email messages, and news articles.
- Your Name:** Pierre A. Damas
- Your Email:** pierre.damas@di.cec.be
- Reply-to Address:** pierre.damas@di.cec.be
- Your Organization:** EC - DI - STB - OD
- Your Signature File will be appended to the end of Mail and News messages**
- Signature File:** [Empty field] [Browse]

At the bottom of the dialog are buttons for 'OK', 'Cancel', and 'Help'.

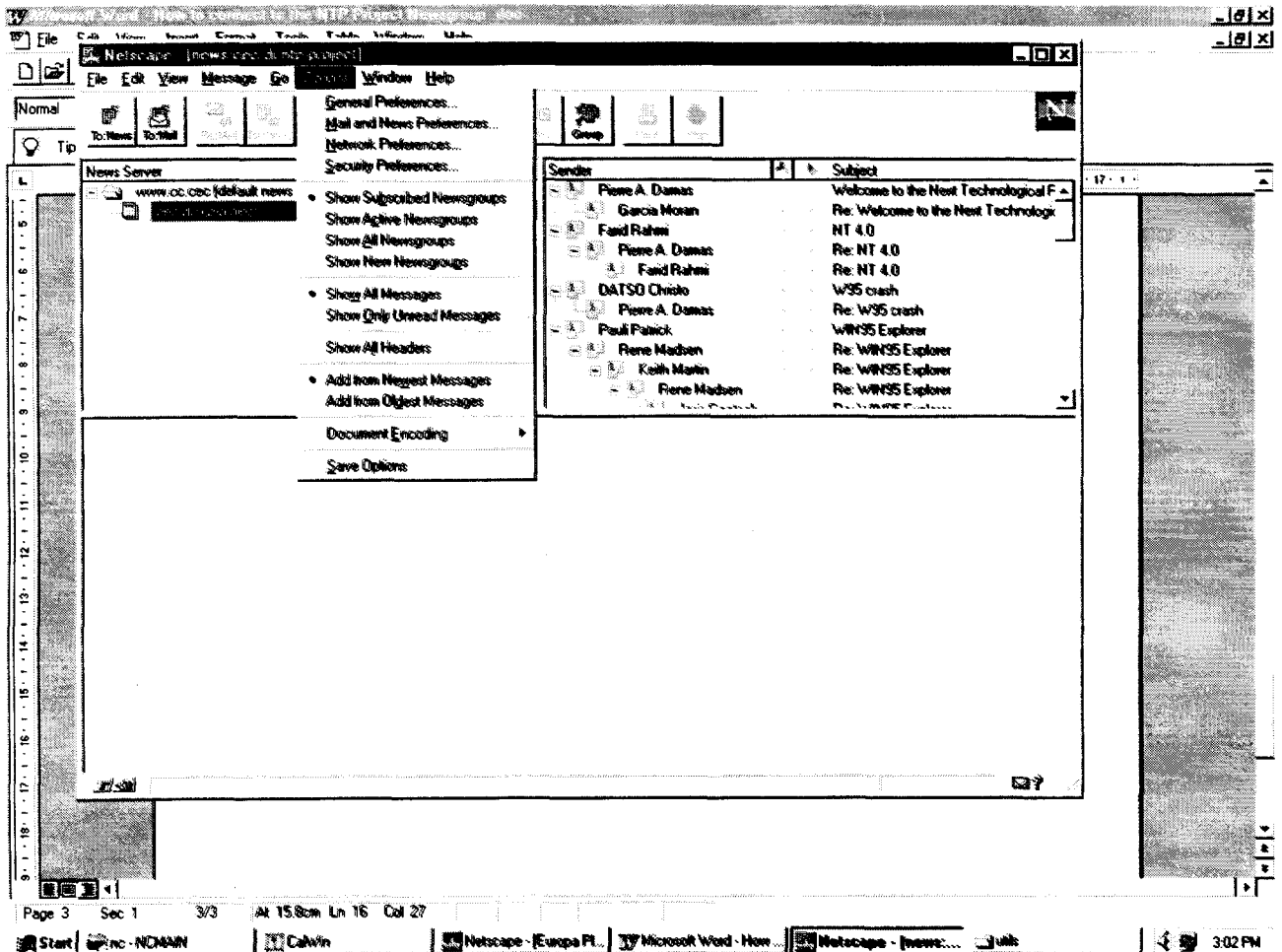
- In the name field, enter your full name
- In the E-Mail field, enter your Route400 address in RFC-822 format (e.g. pierre.damas@di.cec.be)
- In the Reply To Address field, enter the same address
- Enter your Organisation in the next field (e.g. EC - DI - STB - OD)

Go to the News

- Activate in the menu Window the item Netscape News
(The list of the newsgroup on the www.cc.cec server appears)
- If you don't see the cec.di.ntp-project newsgroups,
 - Choose in the menu Options the item Show All Newsgroups (if this item is grayed, be sure that the www.cc.cec list is expanded (small minus before it))
 - Expand the line beginning with cec.*
 - Select the cec.di.ntp-project newsgroups
 - Subscribe to the desired newsgroups



- If you don't see any message in the newsgroup, choose in the menu Options the item Show All Messages



Post new messages

or reply to existing messages, and enjoy!

Note: a "feature" in Netscape News reader may cause the "Posting Not Allowed" message to be returned. Check that:

- 1) you have access to the newsgroup (the number of messages is present, and not ???)
- 2) you subscribed to this newsgroup (a yellow check mark appears in the square box)
- 3) the option "Show Active Newsgroups" is selected.

Pierre A. DAMAS
DI / STB

Migrating 16-bit Applications for the NTP platform

This document has for aim to describe the strategy of migration of the Commission's Information Systems to the 32-bit operating systems, also called the "Next Technological Platform", and to give general guidelines to the development teams.

We will present the different problem areas encountered during the migration process.

Finally, we will highlight the general points to take into account when developing 32-bit applications.

STRATEGY

Our final goal is to have, on our 32-bit platform, only 32-bit applications and components running. But this is a mid- to long-term goal, and in the meantime...

The first point to note is that the new 32-bit operating systems support most our existing Information Systems as they are, in their 16-bit version. Extensive tests have been made, showing that, when installed in the recommended configuration, with exactly the same original 16-bit components, these applications continue to work with an acceptable level of performance.

Secondly, the tools proposed for the development of our Information Systems evolved. PowerBuilder, Visual Basic, Access, Developer2000, Visual C++, ... have new versions, adding functionality and allowing development of 32-bit applications.

Finally, our applications also evolve, and need maintenance actions or new versions to respond to new needs.

We must take the opportunity of adding functionality to migrate our applications to the new version of the tools and the 32-bit environment.

But we should not invest in converting our applications to new versions of the tools or to the new platform if it does not need any maintenance or evolution actions.

BENEFITS OF MIGRATING

Migrating to the 32-bit environment can benefit to the applications:

- * the resources are not so limited (for example, the number of windows simultaneously opened, the GDI resources consumed by graphic objects)
- * the memory is almost unlimited... but pay attention to performance: you must know exactly how much memory your application consumes, (for itself, for the run-times, for the middleware and the components), and be sure that the target platform will have most this memory available in RAM and not on disk virtual memory, to avoid continuous swapping.
- * when using languages compiling in native code, the code can be smaller and faster of about 1/3.
- * no more conventional memory problem: the 32-bit applications are not affected by usage of the memory below the 1Mb barrier, as their 16-bit equivalent under Windows 3.1.

It can be beneficial to the user also, by reusing the same controls and metaphors than the platform, allowing better confidence in the application and minimizing training.

However, let us repeat it again, an application that is working correctly today in a 16-bit version will continue working successfully on the 32-bit platform, if installed in the same conditions, without any modification.

WHEN MIGRATING?

Do not worry concerning 16-bit applications

within 32-bit production environments. 32-bit platforms are the context of the ongoing Next Technology Platform project at the Commission. Your 16-bit applications run without modification on these 32-bit platforms.

Long term projects where application development has already started, should consider migration towards 32-bit only if the application will be deployed on 32-bit platforms.

Short term projects reaching the final stage of development should remain on 16-bit. This has the least impact on delivery dates. But you can evaluate the migration and its impact. Depending on this result you can decide what to do.

A more difficult questions is what do I do if I am not sure what the deployment platform is going to be?

In this case one can use 32-bit to develop having following restrictions in mind:

- * Make your application platform independent.
- * Retain a unique source code. Avoid having 16 and 32-bit application version in terms of source code, do of course generate 16 and 32-bit executables.
- * Keep you GDI resources in mind and be moderate in the usage of Windows 95 specific controls.

MIGRATION PHASES

Although you should only make the migration effort when there is new requests for changes or maintenance actions, you should consider to isolate the different problem areas: the technical part, due to the 32-bit environment and the new version of the development tool, and the functional part, adding functionality and implementing user's requests.

For example, you can migrate in several steps:

- * Migrate the application to the new 32-bit development tool and platform. Here, you should resolve the technical problems in relation to the tool changes and to the platform specific changes. These technical problems will be reviewed in the next chapter.

- * Change the user interface to adapt it to the interface standards. Change the different fonts, ... but also the general navigation of your application: you can consider to use a treeview control or property pages, a tab control to perform some actions that were implemented differently.
- * Then, when your application is fully functional and tested in its new form, implement the new needs and the requested functionality.

MIGRATION TOPICS

What are the problems that you can encounter when migrating a 16-bit application to 32-bit?

- * You can have problems because your application was calling directly the Windows API. Now, the API is called the Win32 API, and some functions are removed, have changed of name, accept different parameters or have been extended.
- * You can have problems because you were using components or different applications (Office tools, electronic mail), for which the technology has changed or the product has evolved.
- * You can have problems accessing the file servers (changes from NFS to NT (SMB))
- * You can encounter problems related to the new version of your development tools, were functions or objects become obsolete, or where new technologies are introduced.
- * You will encounter 'philosophical' architectural problems, due to some changes in the user interface, in the metaphors to use, in the usage of the registry instead of INI files, ...
- * You can also encounter problems due to the coexistence in your development of 16-bit and 32-bit versions, due to the still existing Windows 3.1 platform.

WINDOW API

If your application was using the Windows API, you must now find in the Win32 API the corresponding functions.

The function can have moved to another library, have disappeared, have a new name, accept new parameters, have been extended.

There reference is now case sensitive.

The declaration part allows you to define an alias to the function, minimizing the changes to the code.

Your best companion for these changes is the Win32 API Reference, available on the Microsoft Development Network Library.

TECHNOLOGICAL CHANGES

VBX - OCX 16-bit

Microsoft introduced the technology of independant visual controls with the VBX support in VB 3.0. With Access, this technology was brought into the OLE/COM architecture, and produced OCX controls.

For the 16-bit application supporting these VBX or 16-bit OCX, you will have to find the equivalent 32-bit OCX, and convert the calls to the properties and methods of the old controls to the new ones. Hopefully, a lot of OCX are available with the development tools or from external vendors, and the 16-bit OCX have in most cases their 32-bit equivalent.

OLE servers

OLE takes care itself of the thinking between 16-bit and 32-bit, and vice-versa. This means that a 16-bit client can automate or address a 32-bit server, and that a 16-bit server can be used with a 32-bit OLE client.

So, the new version of your application can always call the old version of the server, or your old application can use a new 32-bit version of the OLE server.

The interface to the OLE servers must be the same from version to version (no modification of the interface is allowed, a new interface can be presented if new functions are added or changes are proposed). So, in most cases (except always possible bug), there will be no pain in that field.

DDE

DDE is still supported on the 32-bit platform, but you should consider to use OLE automation were possible, this technology being supported only for compatibility.

Office products

If your 16-bit application used an Office product to produce reports, graphs, ..., you should consider the following alternatives:

- * install and use the same 16-bit Office component, no matter what is used by the user for the manual preparation of documents or sheets
- * test and use the 32-bit corresponding Office component. OLE will take care of the thinking, and the interface to the server should be unchanged. However, some bugs or unexpected behaviours can happen, so, always test thoroughly the application.
- * migrate to 32-bit if you have other maintenance actions to add to your application.

If your application uses macros, written in Word Basic or Visual Basic for Applications, without any calls to the Windows API or DLLs, they will be converted without problem to the 32-bit version of Office.

File Access

If your application accesses files on servers via a mounted drive, this continues working provided that your client can mount a drive on the specific server. If this server is still Unix, envisage to install VisionFS to allow it to export directories as if it was an NT server.

Think also at the possibility of using UNC (Universal Naming Convention) names (\\server\share\directory\filename.extension) to access the files directly without having to mount a drive.

Electronic mail

For Route400, the problem is not 16-bit or 32-bit (it is still a 16-bit application), but is related to the usage of the WUA (Windows User

Agent) or the RUA (Remote User Agent). If your application was using MAPI, you should still be able to use it, provided that you replaced the Microsoft mapi.dll by the TelNet one.

If your application used CMC (Common Messaging Calls) on Windows, (via, for example, the R4CMC OLE server provided by the DI), you must pay attention to the fact that NetTel's implementation of the CMC library relies on file sharing. You must ensure that your client has the possibility of accessing the shared files, even if the RUA is used. (The mailbox are usually still on NFS boxes). A new object will be developed by DI-STB, relying on the CMC32.dll, to allow communication via the P7 protocol.

In any case, you should always consider to contact first our colleagues of STD to check the best way of interfacing with the mail, and their plans for the mid- and long-term in the support of MAPI and CMC.

NEW VERSIONS OF DEVELOPMENT TOOLS

PowerBuilder

PowerBuilder provides with the v. 5.0 a way to migrate your current application to 32-bit.

Not only the migration to PB 4.0 to 5.0 is seamless (you'll receive a few warning signalling obsolete ways of programming), but your application will also be able to work on the 16-bit or 32-bit platform.

Of course, you should consider, if you are using platform specific functions or technologies, to isolate them in non visual user objects, in different .PBLs that you will deploy depending on the platform.

For the deployment, PowerBuilder 4.0 and 5.0 in their 16-bit version can coexist on Windows 3.1. On the 32-bit platform, PowerBuilder 4.0 will be installed in 16-bit, and PowerBuilder 5.0 in 32-bit. The 32-bit and 16-bit of the same version can't coexist on the 32-bit platform, since the dlls have the same name. The Windows 95 interface controls are available in 16 and 32-bit, since these are not the native controls.

For the detailed evaluation of PowerBuilder 5.0, refer to the documents

PowerBuilder 5.0 Enterprise Edition Evaluation, ref: STBOD(96)11a. and

PowerBuilder 5 Application Development Guide, ref: STBOD(96)12.

Visual Basic

Visual Basic passed from the version 3 to 4.0, and is now at its version 5.0.

Migration difficulties will depend on the version you used, the number of API calls and of VBX/OCX used.

Before any migration effort, convert your forms to text ("save as text"), to allow the new development tool to analyse the dependencies and propose you alternative OCX.

The Visual Basic 4.0 comes in a 16-bit and a 32-bit version, allowing you to develop for both platforms. But the Windows 95 interface controls will not be available on the 16-bit platform. For the detailed evaluation of Visual Basic 4.0 and development guidelines, refer to the documents Visual Basic 4.0 Enterprise Edition Evaluation, ref: STBOD(96)10 and Visual Basic 4 Application Development Guide, ref: STBOD(96)13.

Access

Access passed rapidly from its version 2.0 to 7.0, and now to 8.0. You should consider to migrate from Access 2.0 directly to Access 8.0. We are preparing an evaluation of this 32-bit version, and the development guidelines are available for the version 7.0 with the document Access 95 Application Development Guide, ref: STBOD(96)14.

Developer 2000

Oracle offers the assurance that your applications will be compatible between different computing environments. Migrating an application consists, then, in regenerating the application files (eg, .fmx files from .fmb files) in the new environment.

Using this simply mechanism, the logic of the application can be easily ported from one environment to the other. However, some problems and limitations have been reported by

people doing the migration. A list of the known problems and limitations is in Annex1.

If there is a need of developing applications in the 32-bit environment and deploying them in the 16-bit environment, the FMBs can be recompiled to run on the 16-bit environment as long as they don't use any new built-ins/features of the 32-bit version. Furthermore, Oracle suggests to use a release of Oracle Forms with the same first three digits on both platforms to avoid problems as those mentioned above.

The recommended version of Developer/2000 is release 1.4 for both environments.

To conclude, a final remark: the bug list is different for the 16-bit environment than for the 32-bit, which makes highly desirable to test the application in both environments.

ARCHITECTURAL CHANGES

The new 'Explore' metaphor, the usage of treeviews, tab controls, the apparition of the registry as a central repository of settings, available to all applications, all that will impact the way you design and write your applications. This is explained more deeply in the chapter Building 32-bit applications.

MULTI-PLATFORM ISSUES

You can be confronted, during the first phases of the migration to the new platform, to the possibility of maintaining your application in both a 16-bit and 32-bit version.

The general considerations that can be given on that subject are the same as for a normal partitioned application:

- * isolate the visual interface from the business logic: you will be able to design 2 different windows, one for 16-bit, with 16-bit OCXs, the other in 32-bit with 32-bit OCXs, calling the same application logic that will have common code.
- * encapsulate your platform specific calls in dedicated classes: depending on the platform, you will deploy or instantiate one class or another, making the calls available through the same interface.

The rest will be case by case resolution of problems, that will vary depending on the language and development tool you use. The higher level it is, the less problems you will have.

DEPLOYMENT

The philosophy used for the deployment of the 16-bit applications is still applicable: you must separate the infrastructure from your application. The infrastructure is composed of the run-times, the middleware, the local database engine (if any). The application is composed of its executable, dlls or pbls, and initialisation settings.

The installation scripts for the infrastructure are available on Softline.

For your application, the DI can offer you the possibility of creating your 32-bit installation script for diffusion in your DG, taking care of the backup of the dlls replaced, the silent mode of installation, and the parametrisation by the LSA for inclusion in NetCon.

You will find additional information in the document Deployment of 32-bit client-server applications, ref: STBOD(97)06.

BUILDING 32-BIT WINDOWS APPLICATIONS

STRATEGY

Building new applications for a 32-bit platform requires you change your habits in 3 domains:

- * the Visual Interface
- * the Windows API
- * the Registry, previously know as initialisation file.

Visually you should start using all the new Windows 95 controls (TreeView, tabs, etc.) and the general browse, and explore metaphor. But, on a 16-bit platform, don't! They are not so well integrated in the user environment, and if you use too many graphical objects, it is rapidly

eating up GDI resources. This problem does not occur on a 32-bit platform because the GDI management changed dramatically.

When interfacing to the Windows API, you need to re-educate yourself. Functions have changed, extended, or did simply vanish. Others have a compliant interpretation preferred above the current one. A lot of functions also ended up in another library.

Another noticeable change is the use of the Windows Registry which replaces our good old fashion and dirty INI files. Now all applications can find all system and application information in a central place where they also should put their own settings.

Two books should be your guides in developing 32-bit Windows 95 applications:

- * Programming for the Windows 95 interface
- * Win32 programmers reference

THE VISUAL INTERFACE

An overview of GUI elements which changed in Windows 95, and Windows NT 4.0.

Bars

Tool- and status- bars now are standard objects. Your application can have easily a customisable toolbar just by adding this component. On the statusbar you can visualise several panels containing information. The lower right window corner shows a drag handle if the window is sizeable.

Trackbars (Slider, with tick marks), Progress Bars (Gauges), Up-Down Control (the old Spin control to adjust a numerical value) are also standard objects.

Views

To display and manage lists like the Windows Explorer a new Listview standard object exists. The ListView in combination with an ImagesList enables you to create your own Explorer having four different view representations: large icons, small icons, list or report.

The TreeView object, also associated with the ImagesLists, allows you to display lists hierarchically.

Tabs

Of course, the Tab sheets will allow you to present property pages, record details or create wizards.

Edit

The RichEdit control allows you to easily integrate a text editor within your applications. A text editor control can change fonts, colours, and exploiting RTF format.

Dialogues

Common dialogue boxes also have been changed. Now they present different possible list of files views. They support folder creation and file management when opening or saving.

GUI Design rules

The GUI design rules concerning font usage and style also changed: now, you do not use bold face in your dialogues anymore

All these changes have been summarised in the Style Guide for developing Applications for the Windows 95 User Interface which is available on request from DI-STB.

All this leads to...

When developing 32-bit application on Windows 95, your application must use these new controls in a standard way resulting in a standard, uniform, well-known interface for the user where he can work.

THE WINDOWS API

If your application has to perform system related activities it uses system API's. Nowadays we call these the Win32 API.

As already mentioned before, within the Win32 API you will find functions which have changed, extended, or simply vanished. Others have a compliant interpretation preferred above the current one. A lot of functions also ended up in another library.

Functions requiring strings have know sometimes versions suffixed by A or by W depending whether they use ANSI strings or WideChar (Unicode) strings.

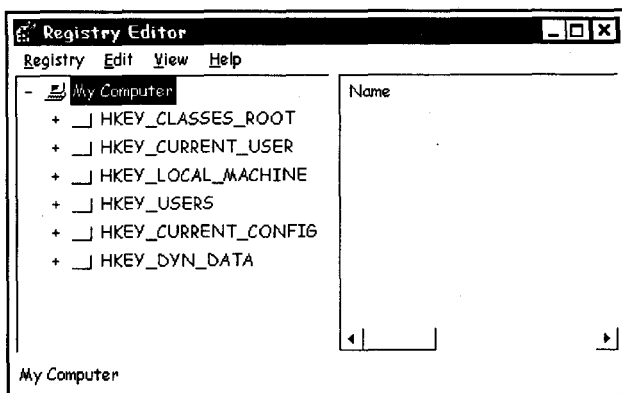
A lot of these Win32 API functions do not work properly on Win32s (32-bit system on Windows 3.1) but only on Windows 95 or Windows NT. So be aware of this. Always check the portability of a function if you want multi-platform possibilities.

In PowerBuilder or Visual Basic, you can call any of the Win32 API functions, as you could before. But be aware that function naming is now case-sensitive. There exists a workaround if this causes problems for you (e.g. migration of code): Specify an alias during the declaration of the function which is case insensitive.

THE REGISTRY

The registry can be seen as a central database, regrouping information about two main things: your machine (its different possible configurations, the software installed on it), and user settings for each user accessing the machine in question.

It is organised as a hierarchical tree (picture 1). Each branch has a value and/or a list of names and values.



Picture 1: Registry Editor

This tree has several main branches or the so called Root Keys, Picture 1 shows all of them. You as developer, should mainly be interested in two main keys:

- * HKEY_CURRENT_USER
- * HKEY_LOCAL_MACHINE.

HKEY_CURRENT_USER contains all settings for the user which is currently logged on. It is a pointer to a specific branch in the tree starting at HKEY_USERS, but in fact you should only be concerned by the settings that the current user has for your application.

HKEY_LOCAL_MACHINE contains setting concerning the system, and for software installed on it.

HKEY_CURRENT_CONFIG points to the current configuration in the list of the possible configurations (e.g. if you have a dockable workstation, or a portable with several PCMCIA cards)

HKEY_DYN_DATA contain registered statistical services which provide real-time information. For instance, the System Monitor gets it information out of the HKEY_DYN_DATA tree of the registry. All different statistical services place there data within the registry were other application can read them.

And finally, HKEY_CLASSES_ROOT points to HKEY_LOCAL_MACHINE\Software\Classes.

In the registry, you register your program at installation time. Installation programs created with the Setup Wizard or with InstallShield do it better than we could do it ourselves.

During a normal Windows 95/Windows NT installation procedure, following things may or needs to become registered:

- * Un-install information
- * OLE servers registration
- * OCX registration
- * file extensions treatments
- * Windows configuration modifications (which corresponds to former WIN.INI modifications)
- * settings for your application itself.

Attention for the last one: application related registration information (former APPLICATION.INI), here you have to separate what is user or installation specific.

For example, if you have to register the list of the available servers for your application, this is installation specific and must be stored in the HKEY_LOCAL_MACHINE key. If you want to retain the last server successfully used, this is user specific and therefore must be stored in the HKEY_CURRENT_USER key.

That way, each user will keep their own settings and find themselves back when running your application another time.

When running against a Windows NT server having user profiles properly setup, your user can go anywhere on the network connecting themselves and finding back his personal settings.

CONCLUSIONS / RECOMMENDATIONS

The new 32-bit platform supports most of our existing applications without any change: if they are installed in the same configuration as before, with the same 16-bit components, they should continue working without problems.

Therefore, we should not migrate them without a good reason.

The reasons can be that:

- * the existing application has reached technical limits, that only a 32-bit version can offer
- * users are requesting new changes needing a new version of the application
- * the application must be ready for future maintenance actions
- * the external components of the application changed (file access, mail, ...)
- * we want to take advantage of the new platform and the new tools
- * ...

But we should always link that effort with a real improvement of the functionality of the application.

The migration itself is not an overwhelming task. We migrated successfully PowerBuilder, Visual Basic, Access and Developer 2000 applications, not without work, but without any major problem. The task is evaluated in days, not in months.

We can, in confidence, recommend that the applications that are working successfully in 16-bit and do not need maintenance actions should be kept in their 16-bit version, and that the task of migrating the application to the new platform should be joined to other maintenance efforts.

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Annex 1:

List of known migration limitations for Developer/2000

The following is a list of known problems and limitations that apply to the migration of applications written with Developer/2000:

1. If ORA_FFI (form function interface) has been used to call windows DLL, the application in 32-bit will not work as you are calling 16-bit DLLs, you have to therefore modify the application to call the right 32-bit DLL.
2. If the application used VBXs, they need to be changed to OCXs involving some programming effort.
3. If DDE was used in the application, it creates problems on Windows NT. A patch is available.
4. If the application saved images and documents in the database with OLE automation, it won't work in 32-bit. A patch is available for it.
5. One problem concerns the layout of the application when migrating Forms from version 4.5.6.5.5 (16-bit) to version 4.5.7.1.7 (32 bit).
The problem happens with some fonts (Arial/bold, Keaterm7,...) and consists on Text Items overlapped and Button text truncated. Oracle has logged a problem on it that will be solved in a future version. A workaround is to uncheck the Default Font Scaling of the "Coordinate information" property of the form and set manually the Character Cell Width and Height using the 16-bit version and, then, open it in the 32-bit version and generate.
6. Due to a change in the f45xtb.dll in Developer/2000 release 1.3, the user exits of an application developed with release 1.2 (16 bit) need to be relinked.

The Internet:

Revolution or evolution?

This document is a compilation of assumptions, recommendations, opinions, ... coming from the Gartner Group conference held in London in June 97. There are no opinion or comments of my own, the only contribution has been to define the subjects and group the main messages given by Gartner Group's analysts under the appropriate subject

Internet Scenario

- The universal connectivity of Internet is changing the way business, governments, educational institutions and consumer interact among themselves and with each other
- The Internet has accelerated the rate of change of technology by an order of magnitude. Web technology is evolving more rapidly than other technologies and escape the normal cycle technology
- By 2000, the Internet will be as much a part of everyday life as the PC today (0.9 probability)

Management issues

- The speed of change and the dynamic nature of Internet and intranet technologies demands management flexibility, which cannot be accomplished without changes to today's tools and technologies
- Technology replacement cycles shorten to 18 to 36 months (0.8 probability), mandating a disciplined technology adoption, implementation and disposal strategy (0.7 probability)
- Through 1998, social factors will be the primary determinant in the successful adoption of Internet technologies and applications (0.7 probability)
- The key IT events of year 2000 compliance and European Monetary Union conversion will reshape and delay mayor IT deployment decisions for 50 % of enterprises, consuming between 15 % to 20 % of total IT resources worldwide through 2000 (0.7 probability)

Strategy and tactics

- Through 1997, using internet-based technologies as a complement to, and augmentation of, enterprise systems - not as replacement - will yield the greatest value for the least risk (0.9 probability)
- Organizations should establish internal standards for their Internet development process, both logic and content, as early as is practical and review these standards regularly
- Organizations that fail, by 1998, to plan for intranet development from the ground up will experience internal chaos similar to that seen in the grow of the public Internet
- Users will have to make trade-offs between last-common-denominator functionality and the use of potentially differentiating features

Application architectures

- A new network-based computing model will play out, essentially displacing traditional client/server architectures for new applications development and deployment
- Componentry will make application development event more complex than client/server. Users must plan to staff this administrative role to "avoid" "component anarchy"
- Through 1999, Web technology will augment, not replace, today's architectural elements (probability 0.8) and should be introduced where it can provide the most business advantages
- Although ActiveX integration of fat clients provides richer integration, three-tier

architectures are better positioned to support alternative clients and to evolve to server-oriented architectures

- Web-based technology (e.g. hypertext and HTTP) will not be the technology used to support the majority of OLTP transactions for either Internet or intranet applications (probability 0.8)

Windows NT vs Unix

- While NT will be prevalent for intranet servers by 1998, Unix will remain the preeminent Internet server platform through 1999 (0.7 probability)
- Microsoft will focus Windows NT "alternate mainframe" efforts on clustering technology in lieu of traditional SMP systems through 1999, resulting in lower scalability and a lack of general purposedness of high-end NT solutions (0.8 probability)
- Despite being the "platform of choice" for both large and small new application workloads through 2002 (0.7 probability), Windows NT servers will suffer from a lack of scalability for enterprisewide applications (0.8 probability)

Web Servers

- Through 1997, more than 90 % of Internet Web sites will implement passive publishing models, static HTML and 2-D graphics enhanced with decorative animation (0.8 probability)
- By 1999, more than two-thirds of serious Web server installations will have to be drastically upgraded or replaced by outside hosting services as server loads out of control (0.8 probability)
- More than 40 % of users will be able to develop their own Web sites and content by end of 1998 (0.8 probability)

Java

- The Java coalition (IBM, Netscape, Oracle, SUN, ...) will produce a "good enough" set of core technologies and specifications that will allow Java to function as a viable

platform by year end 98 (0.7 probability)

- Java development tools will remain immature and inappropriate for mission-critical system development through 1998 (0.8 probability)
- Java will not replace existing platforms but will be the most important technology in enterprises' cross-platform strategies by 1998 (0.8 probability)
- Java's platform independence will be more important on servers than on clients by 1998 (probability 0.8)

Development Tools

- Internet development tools for interactive content and secure transaction management will be sufficiently robust by 1988 and mature by 2000 (0.8 probability)
- Through 1998, traditional AD tools will not adequately address Internet development, from a functionality, architecture and process perspective (0.8 probability)
- Through 1999 more than 80 % of Internet Application Development vendors will need to re-architect their strategy for managing application state (0.8 probability)
- Through 1999, the instability and immaturity of "standards" will increase the cost and complexity of Internet applications development (0.8 probability)
- Object/component based software will not represent a significant revenue stream for packaged application suppliers until 2000 (0.7 probability)
- By 2000, browser-based user interface styles will be stabilized as print newspaper styles, but metaphors more appropriate for voice and others interactive modalities will reshape them again (0.8 probability)
- Through 2002, no application development "silver bullet" will emerge (0.8 probability) however, by 2001, more than 69 % of new applications will be assembled, forcing AD organizations to reskill or outsource 90 % of their development staff (0.7 probability)

Workgroup,

Groupware (Collaboration systems)

- Intranet collaboration systems substantially

satisfying enterprise requirements will not emerge until 1988 to 2000 (probability 0.8)

- Work management is in the middle of a transition. A lack of standards will inhibit the availability of stable workflow technologies through 2000 (probability 0.8)
- Through 1999, Lotus Notes will retain its lead in the high-end workgroup and office system markets (probability 0.7)
- Through 1997, Microsoft will maintain two separate strategies in its head-to-head fighting on the high-end and low-end collaborative battle front, but will have leadership in neither (probability 0.8)
- Internet-driven vendors will adopt and extend the workgroup system model by 1999 (0.6 probability)
- In 1999, Netscape, Microsoft and IBM/Lotus achieve both functional and architectural "gross" parity for Internet and intranet-based workgroup systems (0.7 probability) and they will replace 80 % of their current technology by 2000 (0.7 probability)

Network requirements

- Through 2000, meeting network traffic and bandwidth requirements will supersede traditional network performances goals within intranet (0.8 probability)

Electronic mail

- Netscape's greater Internet integration utilizing HTML-based E-mail and directory services will sustain its competitive position through 1998 (probability 0.8)

Market Actors

- With the Internet and Java a renewed interest in open systems come a new challenger to Microsoft. This time has momentum and the potential to truly challenge Microsoft

Microsoft

- Microsoft will become a major Internet player by 1998, by embedding its proprietary "flavor" of the Internet in every product it ships, thereby touching the vast majority of users (probability 0.8)
- MS's long-term strategy is based on COM, which remain under Microsoft control through 2001 (probability 0.9)

Netscape

- Netscape will be limited by its inability to provide unambiguous guidance to ISVs through 1998 (probability 0.8)

Oracle

- Oracle's Internet platform success will be limited by its NC strategy through 1998 (0.8 probability)

Conclusion

This document give you a "good enough feeling" about Gartner Group Internet/Intranet Scenario but don't forget, Gartner Group are humans!!

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Building independent clients with SQL*Net Version 2

SQL*Net Version 2 is recommended by DI when running Oracle7. The main advantage of using version 2 is that a application has to provide just a logical name to connect to a database (*a service name*). Thus, the program is isolated from any changes to the configuration (changing a database from one server to another, changing the name of the instance, ...).

In order to achieve that independence, SQL*Net Version 2 requires the network to be defined in several configuration files. The files needed to define the network for the EC environment are: TNSNAMES.ORA (a list of the service names; required in the client), SQLNET.ORA (diagnostic and configuration parameters; required in the client) and LISTENER.ORA (names and addresses of all listeners on a server, the system identifiers (SIDs) of the databases; required in each database server).

Hence, two files are required in the client side to define the network: TNSNAMES.ORA and SQLNET.ORA. When modifications are made to the network definition (eg, creation of a new instance, replacement of a server, ...), the updated TNSNAMES.ORA file has to be distributed to all clients and the problems begin.

ALTERNATIVES

This section discusses different approaches allowed by Oracle to solve the above mentioned problem.

Local TNSNAMES.ORA in each Client

It consists on each client having a copy of the TNSNAMES.ORA in its disk. Changes to the network definition will then have to be distributed to each of the different clients in the network. A way to do so is using the software distribution utility (eg, NetCon) to update the TNSNAMES file in the clients.

An issue remains whether the change distribution is to be made incrementally (only changes are distributed) or by replacing the old file by a new one.

Incremental distribution of changes allows each developer to have private service names to which he wants to connect but makes rather difficult the management of different configuration files on each client.

Distribution of a new TNSNAMES.ORA file each time the configuration changes simplifies the management since there is no need to take care of current contents of the file in the client.

Private service names required by a developer or a group of developers have to be defined at the central level.

In both cases, coordination between the DBA and the LSA is needed in order to distribute the right version of the TNSNAMES.ORA to the target clients.

Central TNSNAMES.ORA for all Clients

In this approach, the TNSNAMES.ORA is placed in a mount point on the network and the clients access the file as if it were in the local disk.

Basically, this is a variation of the solution described above but with the advantage that modifications to the configuration can be made without intervention of the LSA. Modifications are automatically available to all clients when the TNSNAMES.ORA is updated with the new configuration.

As before, private service names have to be defined at the central level and will be available to everybody. Access rights have to be properly defined to avoid undesired access to information. The main problem of this approach consists in the inability of the client to connect to any database if the mount point is not available.

Oracle Names

Oracle Names is a name service that provide central storage of network names and addresses, so that clients can contact servers easily without regard to their physical location or specific configuration.

To use Oracle Names, the DBA prepares a central definition of the network with Oracle Network Manager and stores it in a database which is used by the Oracle Names server to resolve any service name requested and to return the right address.

The user should only know the service name assigned by the administrator for the database instance. As long as this service name is not changed, he is isolated from any changes to the configuration. For example, if a new production instance is created or if the instance is moved to a new server, any client can immediately access it without requiring any change to the configuration files.

Therefore, the distribution of changes to the network definition is reduced to a minimum. The SQLNET.ORA file is distributed only when the Oracle Names server changes. Otherwise, all the changes are made at the central level in a transparent way for the clients.

An advantage over the previous solution is the fault tolerance that can be achieved if several Oracle Names servers are defined in the network since clients can have a list of alternative servers to connect to if one of them fails.

The same limitation as before (service names required by one developer have to be defined at the central level and will be available to everybody) is applicable to SQL*Net versions 2.0, 2.1 and 2.2. However in version 2.3, it is possible to have a TNSNAMES.ORA file in the client in addition to Oracle Names. This overcomes the limitation since developers can define their private service names in the local TNSNAMES.ORA file while the rest of the services are defined at the central level in Oracle Names.

Another names service (NIS, DCE, ...)

Because Oracle Names is proprietary, it only stores Oracle services. However, it is possible

with versions equal or higher to version 2.2 to load the network configuration using Oracle Native Naming Adapters into a names resolution service already in use, such as Sun's Network Information Services (NIS) or Distributed OFS Computing Environment Cell Directory Service (DCE CDS).

After defining the network configuration with the Oracle Network Manager, the DBA can take the TNSNAMES.ORA containing the service names and addresses, and load them into the naming service of their choice.

This solution is similar in approach to the use of Oracle Names. However, there are some differences: most of the a names resolution services don't support heterogeneous environments while Oracle Names can, and Oracle Names stores only service names for databases while a generic names resolution service stores all kind of service names.

Currently, there are 4 names services supported: the 2 mentioned above; NIS and DCE CDS and Novell's NetWare Directory Services (NDS) and Banyan's StreetTalk. Support for DNS and X.500 is planned but not available yet.

RECOMMENDATION

The use of Oracle Names or other names service should be preferred to the use of local TNSNAMES.ORA or a central TNSNAMES.ORA because of the administrative simplicity and transparency that can be achieved. The choice between Oracle Names and other names service should be made in view of the specific requirements of each site and the implementation cost.

FINAL REMARKS

What ever the retained solution is, definition of the network configuration is necessary with SQL*Net Version 2. While the definition can be made independently for non-related networks, it is worth to agree and to observe a set of minimum rules to avoid names clashing if several network definitions are merged in the future.

Naming model

When defining the configuration *a naming model has to be selected*. Two main possibilities are offered: a flat or hierarchical model. In the flat model, all names have to be unique since they are considered part of a single domain. In the hierarchical naming model, several domains (possibly nested) are used to structure the names of the services. The names have to be unique in a domain but may be repeated between domains. In order to avoid problems if ever a centralisation of the names service is required or if DGs join or split, a hierarchical model that assigns a unique name to each database service across all DGs in the EC should be adopted.

A proposal for this model is to have a common root to all DGs (eg, EC, CE, CEC, ...) and, then, an identifier for each DG. Each DG could add sub-domains on top of that if necessary. Thus, the names will be of the following type:

service_name.(unit.)DGxx.CEC

An example of a name following this model is TEST.STB.DI.CEC. It designates a test database (*TEST*) existing at DI-STB (*STB.DI*) in the EC (*CEC*).

Administrative regions

Network objects are defined within administrative regions. Each administrative region contains: one or more Oracle Names Servers, one or more domains, one or more network services or database links and several clients.

It is possible to have several independent administrative regions each one administered in isolation. This will allow each DG to independently manage its own databases definition.

However, it may be necessary to access databases of another DG or to access databases located at the DI-CC. Then, it is possible to implement a delegated administration model that allows clients in the one administrative region to access databases in a different administrative region.

The delegated administration model requires a number of organisational measures to be implemented (logical definition of regions, coordination procedures for region administrators), but the first pre-requisite is the existence of a common naming model.

CONCLUSIONS

The introduction of names service will simplify the configuration of the clients, will reduce the need to update the clients when changes are made to the databases and will provide for additional flexibility when migrating databases. Oracle Names seems to be the better solution from the viewpoint of the database.

The introduction of Oracle Names in the DGs should be co-ordinated in order to prevent future problems if their service name definitions have to be joint to constitute a common logical entity. For additional information, please see the document "Configuring database clients with SQL*Net Version 2" (STB/OD(97) 09) available from DI-STB.

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Interconnecting an Oracle RDBMS with an Intranet Web

Sharing the experience

This paper outlines the steps followed from the 'problem statement phase' to the 'implementation phase' to go about inter-connecting an existing Oracle RDBMS Application (ALIS) with Intranet Web technology.

Problem statement:

The Unit in which I work, S&T Co-operation with Developing Countries, makes use of a departmental information system. At regular intervals (once a year) the unit issues a "Call for Proposals", from which the resulting proposals are encoded into an Oracle RDBMS (about 1200 proposals/year).

To plan the "Proposals Evaluation", the same system is being used, as well as to maintain "Evaluation Experts" information and to attribute evaluation panel classification.

This departmental application, called ALIS, utilises, apart from the Oracle V7 engine, an old version of Oracle Forms (2.3 [sic!]) and Oracle Report to manipulate and print-out data from the database. Hence, due to this "character-based" Oracle Forms interface (invoked through TerWinal), Scientific Officers (SO) *refuse* to work with these kind of applications hereby confining its usage to secretaries and horizontal programme support staff.

Bearing this in mind, because Scientific Officers only occasionally need to interact with ALIS, they perceive the character-based HTI (human technology interface) as too complicated to work with (e.g. F4-key to exit, HOME-key to execute a query). Hence the need for a Management Information System which enables the SO to quickly lookup Proposal or Contract data for a specific organisation, country, region whilst talking to a contract partner on the phone, was pursued.

Implementation:

Given the pre-eminence of the World-Wide-Web from 1993 onwards, it was quintessential to integrate it with existing databases. I launched an Intranet Web in my unit at the end of 1994. A problem occurred when funding was requested for this project. Given my unit had no real "informatics budget", we depend on the goodwill and co-operation of the IRM as will be the case in other Directorate Generals. A unix-box (ICL SPARC) was made available for a DG12-wide intranet pilot (DG12Web), on which I could accommodate my unit Intranet Web as well. No budget was available for software at this stage! I closely worked together with the DG12Web team, and we were able to implement useful stuff without spending 1 ECU (apart from a HotDogPRO HTML license). The HTTP server we used is the CERN 3.0 (we should consider upgrading to apache, I know). A plethora of public domain software was being installed and utilised (See: www.dg12:8080/infrmsup/ser-comp.htm & www.dg12:8000).

Now, in order to interconnect the unit Intranet Web with the ALIS RDBMS, SQLnet needed to be installed on the Webserver machine, from which it would then be possible to issue SQL-statements to the central Pyramid Oracle database server and get the results back. This was achieved only during November 1996, due to an idiosyncratic bureaucracy.

The next phase was to select the appropriate public domain middleware in order to seamlessly integrate the RDBMS calls from within the Web

browser. A plethora of software was available at that time (e.g. WDB, oraperl, etc).

I finally chose a rather unknown freeware "dbCGI" from an Australian company CorVu Pty Ltd. (<http://www.corvu.com.au/dbcgi>).

The advantages of their software, besides being offered for free, are in my opinion twofold:

- Embedded HTML-like statements are included in the HTML files, so there is no need to compile or link at application level. There is a mechanism which allows you to pass variables from within HTML forms to dbCGI.
- The "ora7dbcgi" gateway is a C-code *stripped binary* of about 1.5MB, once invoked through CGI, it results in fast RDBMS-to-Web response times (much faster than interpreted languages like perl in oraperl for example).

The disadvantage of dbCGI is that it is an unsupported free product, nevertheless it has proven very robust, stable and fast for us, even allowing SQLnet V2 calls to our Oracle 7.1.6 RDBMS.

Nowadays many good commercial and shareware software exist on the market, like Cold Fusion 2.0 from Allaire (www.allaire.com) or WDB (<http://www.dtv.dk/~bfr/wdb>) to cite two popular ones. A nice book about interconnecting the Web and Databases in my opinion is "Building Internet Database Servers with CGI" from Jeff Rowe at NASA (<http://cscsun1.larc.nasa.gov/~beowulf/db/mybook.html>).

However until today the dbCGI gateway has delivered very satisfactory results, and given we still don't have our own "informatics budget" we will stick to it.

Albeit JDBC, JSQL and the like might revolutionise the way a DBMS will be integrated with the Web in the future, requiring JAVA-enabled Web browsers and hence Windows 95/NT, this unit's solution is operational for about 8 months now, and will continue to be so for the next coming months, until new solutions

are fully tested and NTP (Next Technological Platform) is well established throughout the Commission.

Security:

A great concern was the need for data protection and access control. Only unit staff should be able to consult the ALIS database through the Web. In order to provide user authentication before accepting any query to the ALIS database, I made use of the standard user authentication built into the CERN HTTP server. Moreover, I selected all logins and encrypted passwords from the existing UNIX password file and created a HTTP password file (the actual passwords never revealed). The advantage was that the encrypted password-strings stayed valid within the HTTP authentication mechanism, so the LAN-password (well-known by users) is the same as the Web password, and regular updates via a crontab shell-script keeps both passwords in sync.

Features:

The rest of this paper will talk about actual implementation details of WALIS and features of dbCGI.

The login screen was called WALIS (Webbed ALIS). This screen proposes to view database content through different, often used by a SO, angles (*keyword* in the title of a proposal, part of the *contract number*, part of the *proposal number*, partner *country*, partners' *organisation*, *surname* of the scientific responsible and last but not least an advanced *evaluation expert search* form).

What has struck me is the ease at which data can be viewed in a, as it were, 3D-way, in which the SO can dig into the ALIS database and determine the direction in which he or she is interested.

This enabled us to correct some data inconsistencies. Let me give an example: each organisation is attributed a unique acronym. At the encoding phase, the encoder might create

new acronyms too quickly, resulting in the same organisation being encoded using different acronyms. Using WALIS this can be easily discovered and signalled by the SO.

The "Evaluation Expert" interface consists of an HTML-form and a couple of *dbCGI* embedded files (I gave them a .sql extension) called from the form. The ease at which the SQL *where-clause* can be programmed in the .sql file depending on whether the SO selects one or more criteria to search for experts has to be praised. In this particular HTML-form *nine* different criteria can be combined to compose the SQL query.

Another great advantage is the way one can define headers and even generate "clickable" links which use as a parameter the return of a previous query! Virtually any HTML can be transferred back to the browser, completed with information from the database in a fast and, for the user, simple HTI. A developer who knows how to write SQL-queries, and who is familiar with HTML, can start developing applications in a minimum of time.

Although some basic mechanisms are provided by *dbCGI* to check the validity of form fields (e.g. range, excluding certain control characters, etc), one might consider JavaScript if there is a need to enhance these controls.

Some will wonder whether besides *queries*, one can also execute *updates* or *inserts* into the ALIS database using *dbCGI* ? The answer is yes, it is possible! However, given the stateless nature of the HTTP-protocol, one cannot expect a full featured behaviour like when using for example Oracle Forms. In our case we only use WALIS as a dissemination tool, which is fast and easily accessible and offers a more user-friendly HTI, not requiring any specific client installation besides Netscape.

Demonstration:

Given the confidential nature of our unit's data, I cannot simply publish a user login to WALIS in this paper. However, if after reading all this, you are still interested to see this working, you're very welcome to send me an E-mail, after which I can arrange a (*remote*) demo!

Conclusion:

If, like in our case, you don't have an "informatics budget", and you want to make an existing database application (Sybase, Oracle, ms-access, Informix) available for consultation from any Web browser on IDnet, then *dbCGI* might be a fast, simple and good solution for you. If, however, you don't have an existing database at your disposal, and you do have a budget, please look into text-retrieval software like Fulcrum (www.fulcrum.com), which might be better suited to your needs.

In **appendix** I've added an example of a .sql file, which is invoked by the evaluation expert search form to give you an idea of the code used by *dbCGI*.

Appendix

<sql init>

```
ORACLE_HOME=/u2/home/dba/oracle/product/7.1.6
ORACLE_SID=WWW_D
</sql>
```

<sql connect conn1>

```
USER=oracle_username
PASS=oracle_password
CONN_STR=alisb_p
</sql>
```

<sql headings>

```
<HTML>
<BODY BACKGROUND="/images/bkjaune.gif">
<A HREF="/cgi-bin/ora7dbcgi/ora/exp/query.htm">New Search</A>
<BR>
<CENTER><H2>Evaluation Expert(s) matching your criteria</H2></CENTER>
<CENTER><H5>SURNAME=(%[=SURNAME%]) EXPNUMBER=(%[=EXPNUMBER%])
GCODE=(%[=GCODE%]) MCODE=(%[=MCODE%]) LCODE=(%[=LCODE%])
CYCODE=(%[=CYCODE%]) USED=(%[=USED%]) </H5></CENTER>
</sql>
```

<sql format>

```
<CENTER><TABLE border=1>
<TR><TD width=140 units=pixels><h4><A HREF="http://www.dg12:8000/cgi-
bin/ora7dbcgi/ora/exp/expdet.sql?%1d"><A>%1d</h4></TD>
<TD width=400 units=pixels><h5>%4d %2d %3d<BR>%5d <BR> %6d <BR>%7d %8d
%9d<BR>%10d %11d<BR>%12d </H5></TD></TR><BR>
</TABLE></CENTER>
</sql>
```

<sql query conn1>

```
SELECT
    pof_a,
    pof_nm,
    pof_chnm,
    pof_mr,
    pof_dept,
    pof_labo,
    pof_adr1,
    pof_adr2,
    pof_pobox,
    pof_pc1,
    pof_tnm,
    cy_cynm
FROM
    ampere.fi_pof,ampere.fi_cy
```

WHERE

 pof_dpc = 'RBG4'

AND

 substr(pof_a,4,4) = '4003'

AND

 cy_code = pof_cy

AND

 cy_lge = 'EN'

 %[?GCODE:AND pof_a in (select ept_a from ampere.fi_ept where ept_a = pof_a and ept_ept = '%[=GCODE%]')%]

 %[?MCODE:AND pof_a in (select ept_a from ampere.fi_ept where ept_a = pof_a and ept_ept = '%[=MCODE%]')%]

 %[?LCODE:AND pof_a in (select ept_a from ampere.fi_ept where ept_a = pof_a and ept_ept = '%[=LCODE%]')%]

 %[?CYCODE:AND pof_cy = '%[=CYCODE%]']%

 %[?YEAR:AND pof_dcrea > '01-[%[=MONTH%]-[%[=YEAR%]]']%

 %[?USED:AND pof_a in (select ept_a from ampere.fi_ept where ept_a = pof_a and ept_ept = '%[=USED%]')%]

 %[?SURNAME:AND pof_nm like upper('%%%[=SURNAME%]%%')%]

 %[?EXPNUMBER:AND pof_a like '%%%[=EXPNUMBER%]%%']%

ORDER BY

 pof_nm

</sql>

<sql disconnect conn1>

</sql>

<sql uninit>

</sql>

Dirk JONCKERS
DG12
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EDMS

Electronic Document Management System

In the foreword to the EUROLOOK guide, Secretary-General D. WILLIAMSON describes the Commission as a document factory or, more precisely as a community of craftsmen constantly refining and re-working their own products in the form of documents.

Advances in office automation made it possible that approximately 80% of the Commission's documents are created today in a digital format, that is mainly as textprocessor or spreadsheet files. This is an important achievement, as it is commonly estimated that 90% of a company's knowledge is contained in documents, and only 10% as structured data in databases.

THE PRESENT SITUATION

In principle, documents in a digital format are easier to be accessed, retrieved and shared than the ones which exist on paper, only.

However, it is obvious that the management of our document products, is presently still based to a large extent on the use of paper. To access the information and to share it with our co-workers, much time and effort is spent with filing, printing, copying, mailing, etc. i.e. processing the paper.

Paper is used, because it is still the easiest way to distribute and share information which resides, for example, on the office servers' filesystems, on the PCs' local hard disk drives or even in a multitude of often isolated Information Systems. This is commonly known as the *Islands of Information* phenomena.

The fact that documents are created electronically and exist *somewhere* in a digital format, may therefore not be sufficient for their efficient management, distribution and publishing.

DESCRIBING A SOLUTION

The document repository

Based on a very reliable, but still simple security access scheme, where all document *objects* are aware of first who is entitled to know about their existence and second which operations can be performed (e.g. view, modify, delete), on descriptive metadata, but also directly based on their information content, electronic documents have also to be easily available to and shareable by the users, avoiding the need for the seemingly endless and cumbersome scheme of re-encoding, re-copying, re-filing.

Taking up again the metaphor of the Commission seen as a *Document Factory*, it is clear that the work performed may result in the creation of new documents or new versions of already existing documents, which of course have to be again available and shareable with other co-workers, as long as the document related security aspects, like access control and version management, are satisfied.

The *first element* of the solution can therefore be summarised as an electronic document repository, providing library services for electronic documents, regardless of their type, format and size.

Work co-ordination (workflow)

The creation of documents may often be linked to well defined and structured administrative procedures, either established at the Commission level or specific to one or several DGs and/or services and related to the missions they have to fulfil.

One example for a Commission wide procedure is related to Public Procurement. In a Call for Tenders procedure for instance, the creation of the Tendering Specifications, the Evaluation Procedure Document, the Evaluation Report and finally the Report to the ACPC (CCAM) is obligatory, *documenting* that the rules were properly applied and followed. This type of work, relating to a may be complex, but certainly well structured and stable procedure, can be co-ordinated by a transaction oriented workflow system, which guarantees a very high degree of stability. The reporting facility of such a workflow system may also be important from a legal point of view, as it may be considered as a mean to provide proof of evidence.

However, many aspects of our daily work require a more project oriented, a more flexible approach to co-ordinate work between individuals, possibly even belonging to different DGs and/or services. This is the type of work, where for instance an ad hoc (work-) group is established and then asked to review for example a report or to elaborate a proposal. Commonly, document routing facilities based on the workflow engine and using e-mail as the messaging backbone, to co-ordinate work and to check the status of the routing instances, answer these needs.

Lastly, an important role for the workflow is based on its capacity to integrate and co-ordinate information being stored in a great manifold of

independently designed Information Systems, directly addressing the *Islands of Information* problem. In this case, the workflow can be best described as being the integrator or the link between existing Information Systems.

The *second element* of the solution can therefore be summarised as the work co-ordinator (workflow), for highly structured and stable procedures with or without associated document flow, for less structured, but controlled document distribution (document routing) and finally as an information integrator for legacy Information Systems.

Due to their complementarity and the broad functionality range offered, the two elements of *document repository* and *work co-ordinator (workflow)*, may also form the generic infrastructure for the development of future Information Systems.

Systems, which integrate these two elements, are commonly called Electronic Document Management Systems (EDMS). In order to satisfy its needs in this area, the European Commission launched a Call for Tenders procedure in July 1995 and the contract was awarded in January 1997.

Summary

EDMS consists of two main components:

- the **document repository**, offering library services for documents and files of any type, any format and any size, and
- the document flow and procedure management (**workflow**), to co-ordinate procedure related work and to facilitate project oriented teamworking.

Associated components like scanning, hierarchical storage management and optical storage facilities, form an integrated part of EDMS, which is perfectly compatible with the EC's office automation (e.g. textprocessing, spreadsheet, etc.) and E-mail environment.

EDMS provides a complete solution for the creation, the co-ordinated management and the publishing of electronic documents and may also form the generic infrastructure for a significant number of future information systems. The document repository and the workflow offer standard, but highly customisable interfaces based on WEB technology, aimed at secured document distribution and forms-based workflow, via a standard WEB browser accessing an Intranet server.

EVALUATION TEAM MEMBERS

DG	EDMS EVALUATION TEAM (as of june 97)
2	P. Hirn, M. Di Pietro
4	P. Vandenrydt
13	J. Perez-Vidal, S. Karafillakis
19	R. Bosman, P. Keyaerts
SG	F. Kodeck, T. Allard, K. Seghers
EUROSTAT	W. Wegria, M. Feidt
SdT	M. Bedmar
DI	G. Gascard, D. Deasy, L. Bekaert, J.J. Puig Saques, P.Garant, H.-G. Kohl (Evaluation team leader)

ENQUETE AUPRES DES UTILISATEURS DE LA BASE PERSEE

La base de données PERSEE décrit les différentes étapes des procédures de décision entre les institutions ou organes communautaires, principalement des procédures législatives. C'est une base de données interne à la Commission, mais il en existe une version publique, APC, commercialisée par EUROBASES. Toutes les deux utilisent le langage d'interrogation MISTRAL et peuvent également être consultées en mode assisté.

La production des informations destinées à alimenter PERSEE est en cours de modernisation au Secrétariat général (projet PEGASE) et il est prévu de moderniser ensuite rapidement la diffusion, en utilisant les techniques Internet.

Il a donc semblé utile de consulter les utilisateurs ou utilisateurs potentiels afin de mieux connaître leurs problèmes et attentes et d'essayer de les satisfaire au mieux.

Un questionnaire a été envoyé à environ 500 personnes, utilisateurs effectifs ou non utilisateurs exerçant une fonction dans les secteurs de l'information, documentation, archives, bibliothèques. Le taux de réponse a été de 28 %.

LE PUBLIC

35 % des réponses provenaient de non utilisateurs qui ne se sont donc pas prononcés sur l'état actuel de la base mais ont parfois émis des vœux pour l'avenir. On constate que ce public n'utilise que peu les bases de données en général.

Les utilisateurs de PERSEE qui ont répondu sont majoritairement des utilisateurs de longue date (52 % utilisent cette base depuis plus de 5 ans) et des utilisateurs réguliers. La moitié d'entre eux fait régulièrement des recherches pour d'autres personnes. Tous utilisent plusieurs autres bases de données - plus de 3 en général.

LA RECHERCHE

L'interrogation assistée actuellement disponible (formulaires MISTRAL) n'est utilisée que par une minorité et ne donne pas, satisfaction: on la trouve généralement lente et inadaptée et, à la fois trop rudimentaire et trop difficile!

Les utilisateurs travaillent donc principalement en langage MISTRAL natif. Ils font essentiellement des recherches simples, (93 % des réponses) à partir du titre ou de la référence du document (ce qui permet de penser qu'une grande partie des besoins pourra être couverte par des moyens simples en technologie Internet). 88 % d'entre eux trouvent toujours ou souvent l'information recherchée.

LES SOUHAITS

Les besoins identifiés à travers les réponses semblent être:

- une meilleure information sur le contenu des bases en général, une identification claire de chacune afin de savoir dans laquelle effectuer la recherche, une harmonisation de la présentation des données et de la recherche,
- une meilleure convivialité pour l'interrogation de PERSEE, une diffusion sur *Europaplus*,

- une meilleure mise à jour,
 - l'accès facile au texte intégral des documents cités,
 - une présentation plus compréhensible des informations de procédure surtout afin d'identifier facilement le stade du dossier,
 - des possibilités d'impression et de capture simples à utiliser.
- La qualité de la mise à jour de PERSEE dépend en grande partie de la disponibilité des documents (documents COM, J.O., compte-rendu, P.V. etc...). La mise en place rapide de la diffusion électronique de certains documents raccourcira sans doute les délais. On pourra alors envisager une mise à jour quotidienne de la base.
 - L'accès au texte devrait pouvoir se faire par la liaison avec d'autres bases en ligne ou avec des document-repositories. Les possibilités techniques sont à examiner. La commande des images des documents officiels authentiques devrait être possible via EUDOR.

CONCLUSION

Certaines réponses pourront être apportées facilement par une modernisation de la diffusion, d'autres demandent plus de réflexion et une meilleure organisation, ainsi qu'une meilleure synergie avec d'autres applications.

- Une information plus claire sur le contenu des bases de données et leur interactivité, des possibilités d'orientation vers la base adéquate sont nécessaires. Certaines actions en ce sens sont en cours, elles doivent être poursuivies.
- La diffusion sur Europa et sur *Europaplus* sera effectuée dans les meilleurs délais (un appel d'offres est en cours). Elle permettra la mise en place d'une interface plus conviviale et plus simple. Les recherches sophistiquées ne seront plus proposées d'office à l'ensemble des utilisateurs.
- La compréhension facile des données demande une réflexion approfondie tant sur la nature des informations à fournir que sur leur présentation. Trop d'informations nuisent à la compréhension, mais toutes les informations sont utiles. Il faudra trouver une solution qui permette l'affichage par niveaux de détails successifs.

L'équipe PERSEE remercie toutes les personnes qui ont participé à cette enquête et reste à leur disposition pour toute question supplémentaire.

F. KODECK
IRM / SG

SIC MOBILIER

Gestion décentralisée des biens mobiliers

Historique

La DG9 a décidé en 96 de décentraliser une partie de la gestion des biens mobiliers et de confier celle-ci aux DG. Chaque DG a donc désigné un Gestionnaire des Biens Inventoriés (communément appelé GBI) et son remplaçant éventuel.

Afin d'aider les GBI dans leurs tâches, la DG9 a demandé à DI/SSI de développer un outil informatique. Après présentation de ELS (package de gestion des biens informatiques) et vu sa très large distribution dans les DG, la DG9 a suggéré d'utiliser une version adaptée de ELS. Une étroite collaboration avec les équipes de M. Rosin (DG9.C.3) et M. Vantilborgh (DG9.2) a permis de spécifier rapidement les adaptations nécessaires et les interfaces avec SYSBIEN.

Fonctionnalités principales du SIC MOBILIER

Le SIC MOBILIER permet au GBI:

- de consulter l'inventaire des biens qu'il a sous sa responsabilité et l'ensemble des informations SYSBIEN descriptives;
- de réaliser régulièrement des contrôles d'inventaire physique au moyen des outils code-barres;
- de préparer, de soumettre et de suivre les demandes de déménagements, les reprises et les déclassements auprès des services centraux de la DG9 en utilisant également les outils code-barres;
- de permettre au GBI d'affecter les biens mobiliers à des personnes et à des entités administratives.

Etapas de développement

En partant de ELS, un prototype a été développé en 5 jours. Il a permis de montrer l'interface utilisateur et de démontrer la fiabilité et la faisabilité des solutions proposées.

Sur base de spécifications validées par la DG9, les développements ont été réalisés en août et septembre 1996.

Une première version a été présentée le 17 octobre 1996 à la DG9 et à 5 GBI. Ensuite des adaptations ont été réalisées et des tests intensifs ont été menés par la DI, la DG9.C.3, DG9.2 et 4 GBI.

Mise en production en janvier 97

Cinq sites pilotes de test ont permis de finaliser début janvier 97 une première version de production.

En janvier 97, un cours couvrant non seulement l'utilisation de SICMOB mais aussi l'explication des procédures et nomenclatures a été développé. Les premières installations ont commencé fin janvier 97.

Depuis lors, presque toutes les DG, aussi bien à Bruxelles qu'à Luxembourg, sont opérationnelles et utilisent intensivement l'outil SICMOB.

Premier comité utilisateurs le 18 avril 97

Lors de cette journée, les GBI ont eu la possibilité d'exprimer leurs remarques, suggestions et leurs expériences.

Il en est ressorti que l'outil informatique est très bien perçu par les GBI, que de nouvelles fonctionnalités sont souhaitables.

Deux GBI ont eu l'occasion d'expliquer leurs expériences afin de rassurer ceux qui devaient encore passer en production. Ils jugent leurs expériences très positives.

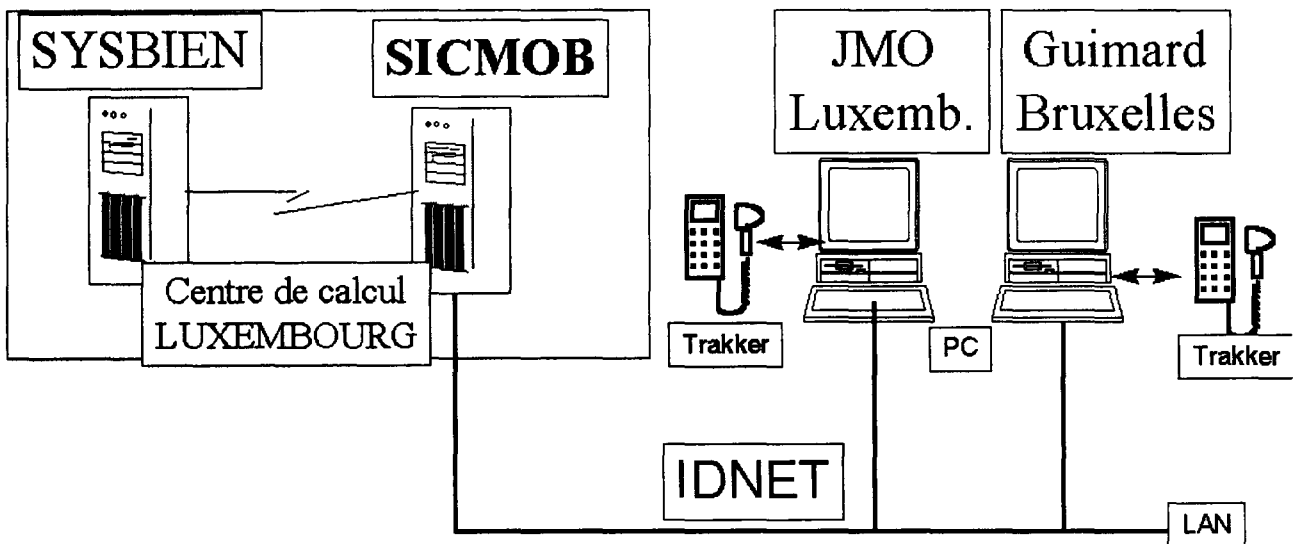
Suite ...

Un nouveau module permettant aux GBI d'introduire leurs demandes de nouveaux biens sera mis en production en été 97.

Une deuxième phase devrait commencer au 2nd semestre 97 afin de décentraliser également la commande de biens et de consommables.7.

Quelques informations techniques

SICMOB est une application client-serveur développée en Visualbasic. Les informations sont enregistrées dans une base de données Oracle centrale située au Centre de Calcul. Il n'y a donc pas de serveur dans les différentes DG. Le serveur SICMOB est interconnecté avec SYSBIEN afin de recevoir de SYSBIEN les informations relatives aux nouveaux mobiliers, et de transmettre à SYSBIEN les nouvelles localisations.



J.F. BLEROT
DI/SSI

EUROFORMS V 1.3a

EUROFORMS permet de saisir sur PC et d'imprimer une série de formulaires. Pour rappel, les 17 formulaires suivants étaient disponibles dans la version V1.2:

- Autorisation accès
 - Demande de modification au bottin
- Congé/CCP
 - Demande de congé
 - Annulation de congé
 - Récupération
 - Report de congé
 - Demande de temps partiel
 - Demande de CCP (Congé de Convenance Personnelle)
- Gestion du personnel par les secrétariats
 - Absence ou reprise des fonctions
 - Promotion
 - Rapport de fin de stage
- Médical
 - Demande autorisation préalable
 - Remboursement frais médicaux
- Mission/formation
 - Ordre de mission
 - Frais de mission
 - Demande de formation
- Organisation bureau
 - Circulation de dossiers
- Réunions/réceptions/représentations
 - Réservation salle de vidéoconférence

Une nouvelle version d'EUROFORMS (V1.3A) sera disponible début juillet 97 sur SOFTLINE.

Cette version comprendra en plus:

- le nouveau formulaire "rapport de notation"
- le formulaire "proposition de promotion" adapté en fonction de la nouvelle notation

- le formulaire "demande d'organisation de réunion"
- la facilité de reprendre les données de l'"ordre de mission" dans le formulaire "frais de mission"
- quelques petites améliorations ou corrections de bugs.

Cette version peut fournir un support informatique pour l'exercice de notation 1995-1997 suite à la décision d'utiliser une nouvelle méthode et un nouveau formulaire. Ce formulaire est disponible dans toutes les langues sauf le grec. Pour les modalités de mise en place de l'exercice de notation, se référer au document "Exercice de notation 1995-1997 - Aspects pratiques" qui a été envoyé aux IRM début juin. EUROFORMS est un outil informatique qui utilise les 'runtime' de PowerBuilder 4.05 et de WATCOM 4.0c. Le script d'installation fourni permettra éventuellement la reprise des données d'une base en version V1.2 existante.

Un module complémentaire permet éventuellement de reprendre automatiquement les données des personnes de la base SIC dans EUROFORMS pour autant que la base Données Communes soit utilisée dans votre DG.

Pour tout renseignement d'ordre technique, n'hésitez pas à contacter votre Help Desk local ou, à défaut:

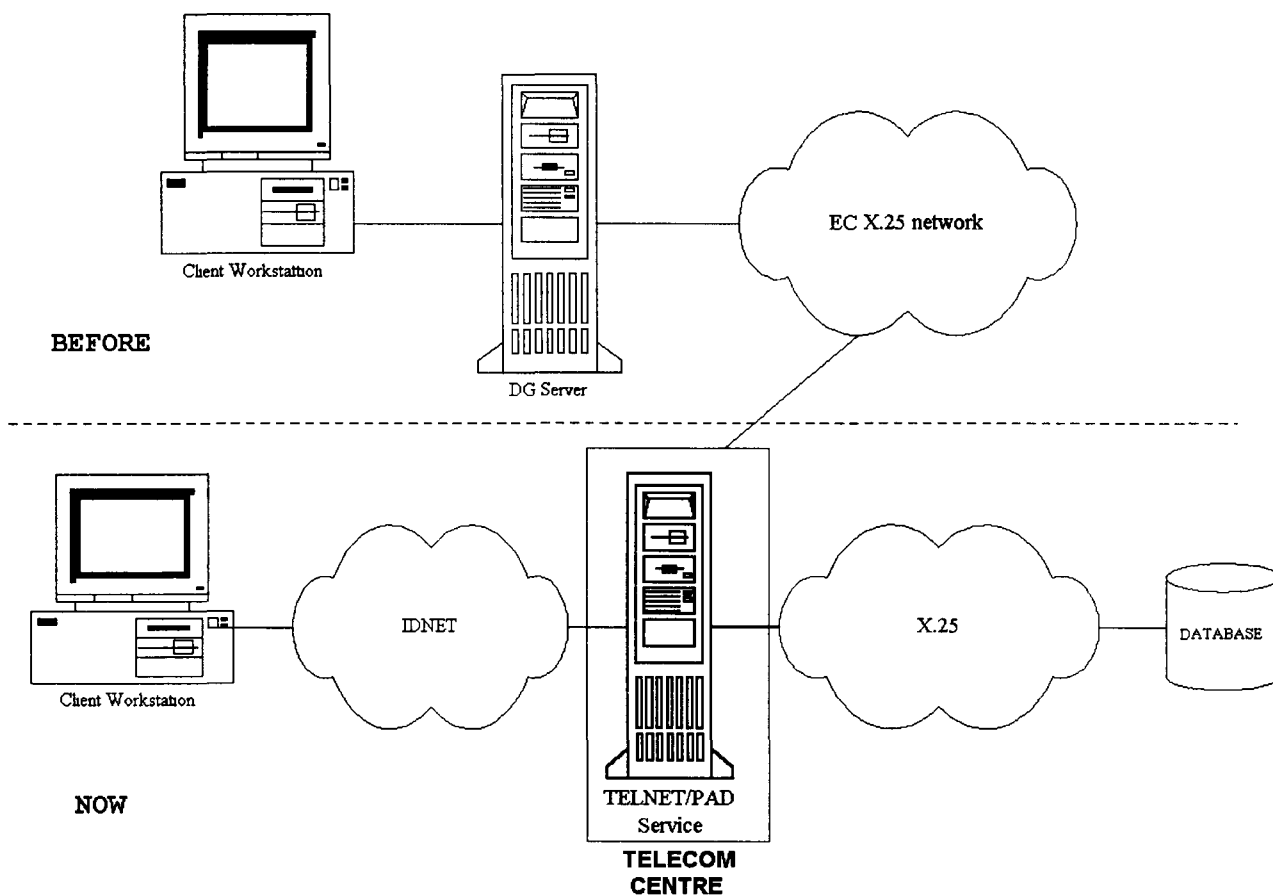
M. Roland CABALLE	M. Philippe GARANT
JMO C2/114	JMO C2/95
Tél.: 33882	Tél.: 33745

Pour des renseignements d'ordre administratif, contactez votre hiérarchie habituelle.

Roland CABALLE
DI/SSI

telecom centre - telnet/pad service ip addresses to x25 nua addresses via tc router

The DI-STD Telecom Centre offers all IDNET users PAD access to the X.25 network through IDNET. Until now these accesses have been done via private EC X.25 networks.



The purpose of this service is to eliminate dedicated X.25 lines used solely for PAD connections, freeing the DG IRM teams from the task of maintaining a local X.25 infrastructure for such connections.

Each X25 address registered in the gateway is mapped to an IP address. Access to an X25 address is done via a TELNET connection using this IP address. The full list of mapped X25/IP addresses can be found on EuropaPlus.

(URL=<http://www.cc.ccc/di/std/tc/telntpad.htm>).

For X25 addresses not defined in the gateway, 2 steps are needed: first open a TELNET connection with the IP address 158.169.137.1, and then enter the NUA number.

For further information on this or any other Telecom Centre service, please call the Telecommunications Point of Contact at 58611, or send an e-mail message to the "TC (DI Telecom Centre)" mailbox.

Marja LIPMAN
DI / STD

DIRECTION INFORMATIQUE

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Directeur	F. de ESTEBAN
Conseiller	P. MARCELLI
Assistant	M. O'LEARY
Gestion des ressources internes	M. O'LEARY
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2. Coordination des ressources humaines et budgétaires (schémas directeurs)	W. BEURMS (f.f.)
SERVICES OPERATIONNELS	
3. Support des systèmes d'information Chef adjoint d'unité	D. DEASY P. BERTRAND
4. Support logistique et formation Chef adjoint d'unité	F. PELTGEN (f.f.) F. PELTGEN
5. Support technique et bureautique Chef adjoint d'unité	F. GARCÍA MORÁN J.P. LAMBOT
6. Service de transmission de données Chef adjoint d'unité	R. KROMMES K. DE VRIENDT
7. Centre de Calcul Chef adjoint d'unité	J.P. WEIDERT A. BODART

(*) Egalement responsable du Service de Traduction

DG	IRM Information Ressources Manager	Position de l'informatique dans l'organigramme	SA System Administration	SU Support Utilisateurs	DV Développement	ISO Informatics Security Officer	Corresp. Inform. O/N
1	COBBAERT J.L.	rattachée à l'Assistant	MOREL L. (système) GIULIANA	GIULIANA V.	COBBAERT J.L.	COBBAERT J.L.	O
I A siège+délé	NAHON C.	rattachée à l'assistant	GINESTE P.	DEBUCK Y. / ELORZA A.	SORE M.	PHAM R	O
I B	DASCALU I.	secteur dans unité horizontale	DG I / PENA A.	CALCAGNO S.	DASCALU I.	DASCALU I.	
2 B L	HIRN P. HOLLMANN F.	unité rattachée au Dir.Gén unité rattachée au Dir. SOS	HIRN P. MAYER A.	HIRN P. FEE A.	HIRN P HOLLMANN F.	HIRN P HERAN M.	O O
3	SILVA A.	dans unité horizontale	DEGREVES J	ELAUT K.	MAEBE P.	MAEBE P.	O
4	VERVAET G.	unité rattachée au Dir.Gén.	LENART M.	SCHWEIGER P	OLIVIER J-L.	VANDENRYDT P.	O
5 B L	BLANCHAR E. LEBEAU J.	rattachée à l'Assistant rattachée au Directeur	DEWAEI P. MELEN J.-M.	PONCELET J.M. CONTER I.	PONCELET J.M. LEBEAU J.	PONCELET J.M MELEN J.M.	
6	PEARE C.	unité dans dir.horizontale	VLAHOPOULOS G.	VLAHOPOULOS G.	FRIZ A.	VLAHOPOULOS G.	
7	MAMBOURG A.	dans unité horizontale	VANDEN BRANDE P.	-----	REMY T.	MAMBOURG A.	
8	HAIK J.	unité rattachée au Dir. Gén.	JOWETT I	LAVOREL B.	-----	-----	O
9 B L	VANTILBORGH H.	unité rattachée au Dir.Gén.	CUCE G. KOEPP C.	CUCE G. KOEPP C	BIERLAIRE P. LUISETTI R. / WILKIN G.	MARTINEAU G.	O
10	CRUCKE F.	rattachée au Directeur Général	FAIRCLOUGH M.	MURGIA G.	CRUCKE F.	MURGIA G.	
11	CUNNINGHAM T.	unité rattachée au conseiller principal	VANDERLINDEN E.	FOULART P.	PHILIPPAERTS E..	CUNNINGHAM T	O
12	DE BACKER A	unité horizontale	SACK C.	SACK C	BORDET O.	DE BACKER A.	O
13 B L	DE SADELEER H. (f.f.) DUNNING A.	unité horizontale rattachée au directeur général	DE SADELEER H GARCIA-BLANES V.	DE SADELEER H.	SANZ VILLEGAS M-T. MAUCQ Th.	MATHIEU A. VLIETINCK M.	O O
14	DOM F.	dans unité horizontale	ADRIAENSEN L	DEWALQUE J.F.	DOM F	RIZO MARTIN J.	
15	VAZQUEZ SOUTO S.	position horizontale	VAN DE STEEN P.	VASQUEZ SOUTO S	VASQUEZ SOUTO S.	VASQUEZ SOUTO S.	
16	ROGGERI A	unité dans dir. horizontale	BOTMAN M ENGELHARDT P.	BOTMAN M.		ENGELHARDT P.	O
17 B L	DE COSTER J.M KSCHWENDT H.	dans unité horizontale unité dans dir. opérationnelle	SELDERS W. MAQUA L.	SELDERS W MAQUA L.	KARMAN J.	DE COSTER J.M.	

DG	IRM Information Ressources Manager	Position de l'informatique dans l'organigramme	SA System Administration	SU Support Utilisateurs	DV Développement	ISO Informatics Security Officer	Corresp. Inform. O/N
19	BOSMAN R.	rattachée au Dir. Général	LENOIR M.	VANDERMEULEN G.	VAN GEEL A.	VAN GEEL A.	O
20	CABALLERO A.	dans unité horizontale	TRUSSART J.L.	LEDOUX C./ DE HENAU C.	MEFTAH C.	CABALLERO A.	O
21	WALKER M.	unité dans dir. horizontale	SURMONT C.	BONNE R.	-----		
22	RONCO ZAPATERO J .	position horizontale	SPYCKERELLE P.		MORAY D.	MORAY D.	
23	KEYMOLEN M.	dans unité horizontale	RODRIGUEZ CASTRO E	RODRIGUEZ CASTRO E	VERNELEN J.	LOPEZ SANTO L.	O
24	CENTURIONE F.	rattachée à l'Assistant	HECHTERMANS B.	STEIN M.	CENTURIONE F.	CENTURIONE F	O
SG	KODECK F.	unité dans dir. horizontale	DUJARDIN C.	DUJARDIN C.	DUJARDIN C.	DUJARDIN C.	
SJ	ORTMANN E.	dans unité horizontale	ACKERMANS L.	ACKERMANS L.	DONVIL J.	HARTVIG H.P.	
SPP	MAC CANN D.	position horizontale	GEORGES L.	MAC CANN D.	MAC CANN D.	PRATS X.	
OSCE	RODRIGUEZ PRIETO A.	unité dans dir. horizontale	SANTOS C.	ZILLIOX N.	DAVIES N.	WIELAND U.	O
AAE	MOTA J	position horizontale	CARVALHOSA M.	CARVALHOSA M.	MOTA J.	MONASSE D.	
BS	BRUNET F.	rattachée à l'Assistant	VIJVERBERG M. ANDRE P.	VIJVERBERG M. ANDRE P.	VIJVERBERG M. ANDRE P.	VIJVERBERG M. ANDRE P.	
CDP	FLOYD W.	rattachée à l'Assistant	WAGNER L.	WAGNER L.	WAGNER L.	WAGNER L.	
SDT B L	VERLEYSSEN P.	unité rattachée au Dir. Gén.	BASTIEN C.	SCATOZZA G. VOLLMER J.	LOGNONE B. DEBART F.	VERLEYSSEN P.	O
IGS	DE GAULTIER DE LAGUIONIE	rattachée à l'Assistant	LOTTEFIER D.	LOTTEFIER D.	LOTTEFIER D.	DE GAULTIER DE LAGUIONIE	
SCIC	D'HOEKERS A.	dans unité horizontale	VAN DEN EEDE G.	VAN DEN EEDE G.	GEVAERT H.	ELIAS C.	O
ECHO	SOETEWY E.	rattachée à l'Assistant	DELSINNE D.			COX R.	
OPOCE	DÖLL F.	dans unité horizontale	MEYER P	SCHMIT C.	SCHMITZ P.	PIERARD A .	
CCR	SALVI F.	rattachée à l'assistant	FERRALORO S.	FERRALORO S.	SALVI F.	LHOST G. / SALVI F.	
DI B L	CRELOT J.	unité	VAN RENTERGEM D. CRELOT J.	VAN RENTERGEM D. CRELOT J.	TOSSETTI A.	CRELOT J.	O

Budget Informatique sur le Titre A5 & Article A-430 : IRMB juin 1997

<i>(en KECU)</i>	
DG	TOTAL
I	1.440
I/A Siège	1 563
IB	1.254
II/BXL	955
II/LUX (ex XVIII)	828
III	1.911
IV	1.371
V/BXL	709
V/LUX	347
VI	3.354
VII	688
VIII	1.765
IX	6.090
X Siège	1.381
X Bureaux	1.393
XI	1.008
XII	70
XIII/BXL	868
XIII/LUX	395
XIV	513
XV	848
XVI	224
XVII/BXL	633
XVII/LUX	896
XIX	4.631
XX	917
XXI	1.287
XXII	460
XXIII	744
XXIV	1.013
SG	3.187
SJ	405
SPP	372
OSCE	3.598
AAE	64
DI	942
BS	184
SCIC	1.405
SDT	3.181
CDP	126
IGS	99
ECHO	532
Dépenses communes	14.560
TOTAL DG	68.208
Management	300
Support des Systèmes d'Information	1.625
Support Logistique et Formation	690
Support Technique et Bureauitique	2.992
Support Transmissions des Données	9.715
Centre de Calcul	14.600
Sécurité informatique	132
TOTAL Services Centraux	30.054
Agence Européenne de Coopération (AEC)	83
Réserve pour imprévus	132
TOTAL	98.478

RESSOURCES HUMAINES HORS EQUIPE IRM EN 1997

(1) (2) (3)

DG	Personnel Informatisable (4)	Administration SI		Projets SI	Informaticiens		Totaux hors équipe IRM		
		Statutaires	Externes	Statutaires	Statutaires	Externes	Stat.	Ext.	Tous
I	562	11		2			13,0		13,0
IA	500								
IB	793				2		2,0		2,0
II	362	6		4	6		16,0		16,0
II SOF					3		3,0		3,0
III	1 079			1,2	,8		2,0		2,0
IV	534	6			12		18,0		18,0
V/Bxl }	698				8		8,0		8,0
V/Lux }	142								
VI	1 144								
VII	330	,5			1		1,5		1,5
VIII	702								
IX	1 756	19			11		30,0		30,0
X	592	12		1,8			13,8		13,8
X Bureaux	484	2			11		13,0		13,0
XI	538				1		1,0		1,0
XII	1 056	2		2	6		10,0		10,0
XIII/Bxl }	615			1	6		7,0		7,0
XIII/Lux }	242	2,3		1	2		5,3		5,3
XIV	259	25		1	6,3		32,3		32,3
XV	428								
XVI	446	1			3		4,0		4,0
XVII/Bxl }	357			1	1		2,0		2,0
XVII/Lux }	302	16		7	3		26,0		26,0
XIX	381	4		24	6		34,0		34,0
XX	256								
XXI	437	80					80,0		80,0
XXII	293	3,8					3,8		3,8
XXIII	244								
XXIV	143	8					8,0		8,0
SG	1 217	1		3,7	9,8		14,5		14,5
SJ	235								
SPP	77								
EUROSTAT	784	58,3		14,4	26		98,7		98,7
AAE	24				,3		0,3		,3
BS	66								
CDP	34								
SDT	1 990	5		4	7		16,0		16,0
IGS	26								
DI	355	2,5		,5	,5		3,5		3,5
SCIC (6)	175								
ECHO	133						0,1		,1
Totaux	20791	265	0	69	0	133	0	466,7	466,7

REMARQUES et CONVENTIONS

1. Sont répertoriés ici le personnel statutaire et les externes intra-muros en régie.
2. Les chiffres des DG correspondent aux annexes des schémas directeurs 1997-99 et concernant 97
3. Les chiffres de la Direction Informatique correspondent à l'état courant.
4. Dans les colonnes des ressources statutaires les chiffres correspondent à des postes, qu'ils soient occupés ou non
5. Source des chiffres de cette colonne: personnel informatisable 1996 des SD 97-99 utilisés dans le cadre de l'allocation courante
6. Les chiffres des interprètes est a ajouté comme personnel informatisable en 1997 ce qui donne un total de 650 en 1997

Les externes ne sont repris que dans la partie EQUIPE IRM étant donné que la ventilation n'est pas connue

RESSOURCES HUMAINES DANS L'EQUIPE IRM EN 1997

(1) (2) (3) (4)

DG	Personnel Informatisable (5)	Equipe IRM											Total Equipe IRM		
		Administration SI		Développ /Mainten		Adm Syst		Supp Util		Mgt (+tâches adm)		Autres	Stat.	Ext.	Equipe
		Stat	Ext	Stat	Ext	Stat	Ext	Stat	Ext	Stat	Ext				
I	596		,4		6,7	1		2	3,0	3		6	10,1	16,1	
IA	793	1		1	6,2	3	1,5	1	3,4	2	1	9	11,0	20,0	
IB	502			2,5	2	1	,5	1	2,3	1,5		6	4,8	10,8	
II	362	,5		2,5	1,4	2		2,5	1,4	2,5		10	2,9	12,9	
II SOF	127	1		4		1,8			,2	2,5	1,3	10,5	,2	10,7	
III	1 079			3	8	7	3	4	8,2	7	,6	21	19,7	40,7	
IV	534			4		3		3		2		12		12	
V/Bxl	698	2				2				1		5	41,0	46,0	
V/Lux	142				1,5	1		1	1,9	1		3	3,4	6,4	
VI	1 144	8,5		6		4,3		4,3		5		28	5,7	33,7	
VII	330	,5		1,5	4,8	1		1	2,6	2		6	7,5	13,5	
VIII	702	1		5	2,9	4	2	3	2,9	3		16	7,7	23,7	
IX	1 756	2	1,7	22	27,8	6	3	7	7,5	9		46	40,0	86	
X	592	,3	5,7	3,8	5,6	2		5	2,8	3		14	14,1	28,1	
X Bureaux	484				1				,4	1		1	1,4	2,4	
XI	538	1		4	1,7	2	1,0	7	3,5	2		16	6,2	22,2	
XII	1 056	5	3	5,0	10	6	4	3	6,5	3	1,6	22,1	25,1	47,1	
XIII/Bxl	615	2		3	6	5		4	,2	3	,1	18	6,9	24,9	
XIII/Lux	242	1		3	3,6	1	,5	4	3	2	1	12	7,1	19,1	
XIV	259	1,5		4,4		1		1,1	,3	4	1,6	13,5	,3	13,8	
XV	428	2		2		1	1	3	5,2	3		11	6,2	17,2	
XVI	485	2,5		3		1		4	,3	7,5	1	19	,3	19,3	
XVII/Bxl	357			3	1,8	2		,5		1,5		7	1,8	8,8	
XVII/Lux	302	3		5	,3	5		2	,3	4	1	20	,5	20,5	
XIX	381	1		10		2		7	,3	9	1	30	,3	30,3	
XX	256	,5	,5	1,5	4	3	1	3	2,3	2		10	7,8	17,8	
XXI	437	,5		16,5		2,5	4	2,5	4,9	11		33	30,9	63,9	
TFRH	293	1		2	1,1	1	1	1	1	3		8	3,1	11,1	
XXIII	244	1,3		,8	1,9	1	1		2,1	2		5	5,1	10,1	
XXIV (SPC)	143			1	2,9	1			1,5	2	1	4	5,4	6	
SG	1 217	4		3,5	2,4	2	4	5,5	12	4		19	18,4	37,4	
SJ	235	,5		,5	,4	1	1	1,8	1	2		5,8	2,4	8,2	
SPP	77							1	,1	1		2	,1	2,1	
EUROSTAT (8)	784	2	3	11,5	30	5,4	2	5,1	3,1	10,5	3	37,5	38,3	75,8	
AAE	24				,3	1			,1	,8		1,8	,3	2,1	
BS	66	,5		,7				,5	1,8	1,5		3,2	1,8	5,0	
CDP	34	,1		,4		,4		1	1,1	,3		2,2	1,1	3,3	
SDT	1 990	1		9	13	12	2	16,5	5,5	6,5		45	20,5	65,5	
IGS	26			1	,6	,3		,7	,2	1,1		3	,8	3,8	
DI (6)	355			2,8	4,4	2,5	2	7,3	1,1	5,5	1	19	7,4	26,4	
SCIC (7)	175	1		3,2	6,0	1		2	5,8	2		9,2	11,9	21,1	
ECHO	133	,5	,5	,5	3	1	1		1,1		1	3	5,6	8,6	
Totaux	20993	48,6	16,9	152,5	219,9	99,1	36,2,5	118,1	107,5	139,7	2,2	385,0	572,8	385,0	957,8

REMARQUES et CONVENTIONS

- Sont répertoriés ici le personnel statutaire et les externes intra-muros en régie.
- Les chiffres des DG correspondent aux annexes des schémas directeurs 1997-99 et concernant 97
- Les chiffres de la Direction Informatique correspondent à l'état courant.
- Dans les colonnes des ressources statutaires les chiffres correspondent à des postes, qu'ils soient occupés ou non
- Source des chiffres de cette colonne: personnel informatisable 1996 des SD 97-99 utilisés dans le cadre de l'allocation courante
- L'équipe IRM de la Direction Informatique est comptabilisée dans le tableau des DG
- Les chiffres des interprètes est à ajouter comme personnel informatisable en 1997 ce qui donne un total de 650 en 1997
- Chiffres de la colonne 96 car les chiffres de 97 n'ont pas été fournis pour raison de réorganisation

Direction informatique (6)		
261	51	312

Les chiffres concernant les externes en régie ne font pas la distinction entre équipe IRM et hors IRM et sont repris pour leur totalité dans l'équipe IRM.

Pour le support utilisateur le nombre de H/A est calculé en divisant le montant en Kecu par un cout standard de 90 Kecu /HA

Projets d'Infrastructure

(situation au 30-6-97)

(1)	Projets			Planification			
	Nom	Objet	Chef de projet	Programme/ Responsable	Phase active (2)	Fin de la phase active	Mise en service (3)
	INSEM2	INTERINSTITUTIONAL ELECTRONIC MAIL-2 Amélioration de la qualité Outils d'encryptage E-mail pour projet NPT Central Management Station	SCHÄFER	DI/IDA	FS CO CO CO	3/97 3/97 2/97 6/97	12/97 6/97 4/97 12/97
	ID INTERNET	INFORMATION DISSEMINATION SYSTEM Impact sur la diffusion de l'information	DE CONINCK / MC HALE	DI	FS/CO	6/96	
	EUROPA EUROPA EUROPA PLUS EUROPA TEAM (4) CAA-V2	DIFFUSION DE L'INFORMATION Serveur externe Serveur interne Serveur interinstitutionnel Interface WWW-CAA	DE CONINCK	DI	OP OP OP CO	01/97	1996 1996 1996
*	ADONIS v 3.1.h Adonis/image Adonis 5	ADMINISTRATION DES DOCUMENTS Corrections, améliorations, sécurité scannérisation, visualisation des documents Dossiers, intégration,	J.F. BLEROT	DI	RI Dv PA		7/97 9/97 10/97
*	TCENTER FTS	CENTRE DE TELECOMMUNICATIONS New Fax/ Telex Server	AGUDO	IDA	RI	9/97	10/97
	DIR	DIRECTORIES Annuaire interinstitutionnel Annuaire interinstitutionnel	SCHÄFER	IDA	FS CO	3/97 5/97	5/97 12/97
*	SNET Step 0 Step 1 Step 2 Step 3	SUPER/SEAMLESS NETWORK Introduction of central switching inside buildings Reorganisation of network management Implementation of an ATM based network Implementation of ATM aware protocols and applications	ABECASIS	DI	CO/OP DEF/CO DEF PA	1997 1996 1997 1996	1996 1998 1997 1998
	GROUPWARE	GROUPWARE/WORKGROUP COMPUTING Projets Pilotes	TOSSOUNIDIS GARCIA MORAN	DI	FS	6/96	
*	NTP	NEXT TECHNOLOGICAL PLATFORM Definition plate-forme cliente Déploiement NTP	GARCIA MORAN BENALI PUIG SAQUES	DI	CO CO	7/97 9/96	1997 1997/98
	CD-ROM	INTEGRATION CD-ROM DANS L'ENV, BUREAUT, Etude de Faisabilité Test nouvelles plate-formes	GARCIA MORAN FRASER	DI	FS RI	4/95 2/96	1995 1996
*	EUROFORMS	PRODUCTION DE FORMULAIRES SUR PC Version 1.2 Version 1.3a	CABALLE	DI	OP OP	6/97	2/97 7/97

Légendes:

- (1) les modifications par rapport à la version précédente sont indiquées par un *.
- (2) PA : préanalyse; FS : étude de faisabilité; DEF : définition; CO : construction; RI : running-in; OP : opérationnel
- (3) en cas de PA et de FS, la date de mise en service est donnée à titre indicatif ("E").
- (4) précédemment EUROPA CLUB

PROGRAMMES DE FORMATION INFORMATIQUE					
POPULATIONS/ .Sujets	Méth.	Dur.	Resp. de sujet	Instructeurs	Stat. [1]
UTILISATEURS INTERNES (19000)					
<u>PROGRAMME GENERAL</u>					
• Cours à l'entrée en service					
- L'informatique à la Commission (cours à l'entree en service)	C	0,2	HERDIES	(IRM/DI)	A 01
- Sensibilisation à la sécurité	C	0,2	BREMAUD	(BS)	A 01
• Initiation Générale					
- A l'informatique	P	3,	BROUSMICHE	Externe	A 08
- A la bureautique	P	3,	BROUSMICHE	Externe	A 08
- A l'accès aux bases de données d'information	P	3,	HOCCART	Externe	A 17
<u>PROGRAMME LOCAL BUREAUTIQUE</u>					
• Formation locale bureautique	P/A	var	BROUSMICHE	Support local / externes	A 09
<u>PROGRAMME CENTRAL BUREAUTIQUE</u>					
• Initiation PC-DOS/Windows	P/A	1,	BRANTS	Externe	A 09
• Système d'exploitation					
- De Windows 3 1 vers la NTP (Windows 95, Windows NT)	P	1,	GRITSCH	Externe	
• Traitement de texte					
- EUROLOOK sous MS-WORD 6 /Windows Initial	P	1,	GRITSCH	Externe	10/96
- EUROLOOK sous MS-WORD 6 /Windows Perfectionnement	P	1,	GRITSCH	Externe	
- EUROLOOK sous MS-WORD 6 /Windows Spécialisé	P	1,	GRITSCH	Externe	
• Kit multilingue et convertisseur de documents					
- MF-Windows et MF-WINCONV	P	0,5	LEUNENS	Externe	
• Tableur					
- EXCEL Initial	P/A	1,	KUSTERMANS	Externe	
- EXCEL Perfectionnement	P/A	1,	KUSTERMANS	Externe	
- EXCEL Spécialisé	P	1,	KUSTERMANS	Externe	
- EXCEL Compléments	P	1,	KUSTERMANS	Externe	
- EXCEL Macros	P	1,	KUSTERMANS	Externe	
• Base de données personnelles					
- MS-ACCESS Initial	P	2,	LIMBOS	Externe	
- MS-ACCESS Perfectionnement	P	2,	LIMBOS	Externe	
• Outil graphique					
- VISIO Initial	P	1,	KUSTERMANS	Externe	
- VISIO Perfectionnement	P	1,	KUSTERMANS	Externe	
• Générateur de présentations					
- POWERPOINT Initial	P	1,	KUSTERMANS	Externe	
- POWERPOINT Perfectionnement	P	1,	KUSTERMANS	Externe	
• Agenda électronique					
- CALANDAR Initial	P	0,5	ROSETY	Externe	
- CALANDAR Perfectionnement	P	0,5	ROSETY	Externe	
• Gestion des projets					
- MS-PROJECT	P	1,	KUSTERMANS	Externe	
• Télécommunications					
- Passerelle ILS/telex, teletex, fax et MHS	P	0,5		Externe	
- Route 400	P	0,5		Externe	
- Emulateur LOG-WS	P	0,5	SONDERSKOV	Externe	
- Utilisation rationnelle du PC en réseau	P	0,5	BECKER	Externe	
<u>SYSTEMES D'INFORMATION</u>					
• UFI (User-Friendly Interface) MISTRAL	P	0,5	Mc HALE	Externe	A 09
• Bases de données d'information					A 17
- CATEL-ABEL	P	1,	LOUX	Externe	
- CELEX					
. Base	P	1,	TARIZZO	Externe	
Perfectionnement	P	1,	TARIZZO	Externe	
- ACTU	P	1,5	COBOS	COBOS	
- PERSEE	P	1,	HUCKERT	HUCKERT	
- CERES	P	0,5	CRAHAY	CRAHAY	
- ECLAS	P	1,	BRAUNE	BRAUNE	

PROGRAMMES DE FORMATION INFORMATIQUE					
POPULATIONS/ Sujets	Méth.	Dur.	Resp. de sujet	Instructeurs	Stat. [1]
SYSTEMES D'INFORMATION (suite)					A 09
• SIA (Systèmes d'Information Administratifs)					A 09
- SINCOM					
. Budget général					
- Généralités, saisie et validations, fichiers tiers, lots	P	2,	HOEBEECK	Externe	
- Consultations de l'exécut, validations des transactions	P	1,	HOEBEECK	Externe	
. Budget de recherche					
- Consultations de l'exécut., validations des transactions	P	1,	HOEBEECK	Externe	
• SIC (Systèmes d'Information Communs)					
- SIC-Courrier (ADONIS)	P	1,5	CREEMERS	Externe	
- SIC-Developpement autour des SICs	P	2,	MAIN	Externe	
- SIC-Finances (end user)	P	0,5	MAIN	Externe	
- SIC-Finances - aspects financiers	P	0,5	MAIN	Externe	
- SIC- Help-desk (gestion du support)	P	1,	BARRY	Externe	
- SIC-Inventaire (gestion des biens informatiques)	P	2,	BARRY	Externe	
- SIC-Missions	P	0,5	MAIN	Externe	
- SIC-Mobilier (gestion du mobilier par GBI)	P	1,	BARRY	Externe	
- SIC-Personnel	P	0,5	MAIN	Externe	
• Autres systèmes d'information					
- ARCHIS	P	0,5	HOFFMANN	(SG)	
- BASES	P	0,5	DE BRUYNE	(OPOCE)	
- INFRACTIONS	P	1,	(SG)	(SG)	
- EUROSTAT et ses produits	C	0,2	MATHIEU	(OSCE)	
- NEWCRONOS: fonctions de base	P	0,5	MATHIEU	(OSCE)	
- NEWCRONOS. fonctions avancées	P	0,5	MATHIEU	(OSCE)	
- CUB.X sous UNIX	P	0,5	MATHIEU	(OSCE)	
- PC SIMPLE	P	0,5	MATHIEU	(OSCE)	
- NEWCRONOS, CUB.X et PCSIMPLE install., config. et support	P	1,	MATHIEU	(OSCE)	
- Le CD-ROM général EUROSTAT-CD	C	0,5	MATHIEU	(OSCE)	
- COMEXT					
. COMEXT sur CD-ROM	P	0,5	MATHIEU	(OSCE)	
COMEXT2: fonctions de base	P	1,	MATHIEU	(OSCE)	
COMEXT2: fonctions avancées	P	1,	MATHIEU	(OSCE)	
COMEXT2: installation, configuration et support	P	0,5	MATHIEU	(OSCE)	
- PROMAN	P	4,	(XVII)	(XVII)	
- PROVA	P	5,	(XVII)	(XVII)	
- SIRENE	P	1,	(XVII)	(XVII)	
UTILISATEURS EXTERNES (3000)					
• Bases de données ouvertes au public					
- CATEL-ABEL	P	1,	LOUX	Externe	
- CELEX	P	2,	(OPOCE)	Externe	
- SCAD-INFO92	P	1,	MORALES	(SG)	
- ECLAS	P	1,	BRAUNE	(X)	
GESTIONNAIRES DES SYSTEMES D'INFORMATION OPERATIONNELS (200)					[2]
• SIC (Systèmes d'Information Communs)					
- SIC-Administration & sécurité	P	0,5	MAIN	Externe	
ENCADREMENT UTILISATEURS (900)					[2]
• Guidelines for project management	C	0,5	GROEMER	GROEMER	A.09
PERSONNEL INFORMATICIEN (400)					[3]
PROGRAMME COMMUN					A 09
• Accueil des nouveaux informaticiens					
- Organisation, architecture, product management, schéma directeur, budget, logistique, transmissions de données, sécurité, bureautique, équipements, support, C27 systèmes d'information, centre de calcul, diffusion	C	4,	(IRM/BS/DI)	(IRM/BS/DI)	
SUPPORT DES UTILISATEURS					A 09
• Support des produits					
- WORD 6 pour moniteurs(trices)	P	3,	KUSTERMANS	Externe	
- Support de EUROLOOK 3.0 et de MF-WINCONV	P	0,5	TOSSOUNIDIS	Externe	05/96
- Supporting Microsoft EXCEL 5.0	P	3,	KUSTERMANS	Externe	
• Gestion du poste de travail					
- PC2000	A	4,	BROUSMICHE	CBT package	
- Gestion des imprimantes	P	2,	BRANTS	Externe	
ADMINISTRATION SYSTEME					A.09
• UNIX					
- Introduction	P	1,5	DEBACKER	Externe	
- Shell Base	P	2,	DEBACKER	Externe	
- Shell Avancé	P	2,	DEBACKER	Externe	
- Administration système Unix V.4	P	2,	DEBACKER	Externe	

PROGRAMMES DE FORMATION INFORMATIQUE					
POPULATIONS/ .Sujets	Méth.	Dur.	Resp. de sujet	Instructeurs	Stat. [1]
ADMINISTRATION SYSTEME (suite)					
- Administration système SCO-Unix / ODT	P	2,	DEBACKER	Externe	A 09
- Mécanismes internes	P	3,	DEBACKER	Externe	
- Spécificités des systèmes (Bull, Digital, ICL, NCR, Olivetti, SNI, SUN)	P	3,	DEBACKER	Constructeur	
- Sécurité	C	1,5	BECKER	Externe	
• MS-DOS/MS-Windows					
- MS-DOS Avancé	C	2,	BRANTS	Externe	
- MS-Windows Avancé	C	2,	BRANTS	Externe	
• Distribution automatique de logiciels					
- Configuration de référence bureautique	P	1,	FRASER	Externe	
- NetCon	P	2,	GOMEZ	Externe	
- Scripts MS-SETUP	P	1,	FRASER	Externe	
• Administration système de progiciels					
- MS-WORD/Windows Macros	P	1,	KUSTERMANS	Externe	
- EXCEL Macros	P	2,	KUSTERMANS	Externe	
- CALANDAR Administration	P	2,	ROSEY	Externe	
- Administration ORACLE 7 pour UNIX	P	1,	MARIN	Externe	
• Emulateurs					
- LOG-WS (9750) Administration	P	1,	MULLER	Externe	
- RUMBA (3270) Administration	P	2,	MULLER	Externe	
- TERWINAL Administration	P	2,	ADAMI	Externe	
- EXCEED Administration	P	1,	MULLER	Externe	
• Réseaux					
- Introduction	P	2,	HERDIES	Externe	
- TCP/IP Avancé et SNMP	P	1,	HERDIES	Externe	
- X400	C	1,	SCHAEFER	Externe	
- ROUTE 400	P	1,	LIPMAN	Externe	
- Administration réseau local					
Initiation à la gestion du LAN	P	1,	HERDIES	Externe	
PC NFS / NFS	P	2,	GOMEZ	Externe	
LAN-MANAGER Administration	P	2,	LIPMAN	Externe	
LAN-MANAGER Avancé	P	1,	LIPMAN	Externe	
DEVELOPPEMENT ET MAINTENANCE DES SI					
• Context, guidelines and methods					A 09
- Planification et suivi de projets	P	4,	GROEMER	Externe	
- Piloter un projet avec MS-PROJECT	P	3,	GROEMER	Externe	
- CASE tools	C	1,	MARIN	Externe	
- Utilisation Guide de développement PowerBuilder	P	1,	MARIN	Externe	
- Utilisation Guide de développement Visual Basic	P	1,	MARIN	Externe	
- Utilisation Guide de développement MS-Access	P	1,	MARIN	Externe	
- OLE : concepts et utilisation	C	2,	MARIN	Externe	
- ODBC . concepts et utilisation	C	1,	MARIN	Externe	
- Accès à ORACLE via ODBC	C	2,	MARIN	Externe	
- Sécurité dans la construction des SI	C	1,	BREMAUD	Externe	
• Languages, DBMS and other development products					
- C					
Introduction	P	3,	MARIN	Externe	
Intermédiaire	P	3,	MARIN	Externe	
Avancé	P	2,	MARIN	Externe	
- ORACLE					
Overview des fonctionnalités ORACLE 7 3	C	1,	MARIN	Externe	
ORACLE SQL and SQL*PLUS	P	4,	MARIN	Externe	
PL/SQL and procedural option	P	3,	MARIN	Externe	
ORACLE 7 DBA	P	5,	MARIN	Externe	
ORACLE 7 DBA for developers	P	2,	MARIN	Externe	
Developer/2000 foundation	P	1,	MARIN	Externe	
Forms 4.5					
- Overview	C	1,	MARIN	Externe	
- Introduction	P	4,	MARIN	Externe	
- Avancé	P	3,	MARIN	Externe	
- Workshop	C	1,	MARIN	Externe	
Reports 2.5	P	3,	MARIN	Externe	
Graphics	P	2,	MARIN	Externe	
Developer 2000 applications workshop	P	1,	MARIN	Externe	
Utilisation de Procedure Builder	P	3,	MARIN	Externe	
DBA tips and hints	P	1,	MARIN	Externe	
ORACLE 7.3 backup and recovery	P	3,	MARIN	Externe	
ORACLE 7.3 . Performance and tuning	P	3,	MARIN	Externe	
Implementing distributed ORACLE 7 systems	P	1,	MARIN	Externe	
GUI design for ORACLE Forms 4 5	P	1,	MARIN	Externe	
Business Modelling and database design with Designer/2000	P	5,	MARIN	Externe	

PROGRAMMES DE FORMATION INFORMATIQUE					
POPULATIONS/ .Sujets	Méth.	Dur.	Resp. de sujet	Instructeurs	Stat. [1]
DEVELOPPEMENT ET MAINTENANCE (suite)					A.09
. Database administration : a structured approach	C	x	MARIN	Externe	.
. Workshop (contenu selon l'actualité)	C	1,	MARIN	Externe	.
- ADABAS/NATURAL					
. ADABAS V5 Fundamentals	P	1,	MARIN	Externe	.
. ADABAS V5 Database design	P	2,	MARIN	Externe	.
. ADABAS V5 Administration	P	3,	MARIN	Externe	.
. NATURAL V2 Introduction	P	3,	MARIN	Externe	.
. NATURAL V2 Avancé	P	3,	MARIN	Externe	.
. NATURAL V2 Administration	P	2,	MARIN	Externe	.
. NATURAL V2 Security system (NSS)	P	2,	MARIN	Externe	.
. PREDICT V3	P	3,	MARIN	Externe	.
- POWERBUILDER					
. Overview PB et Infomaker	C	1,	MARIN	Externe	.
. Introduction	P	4,	MARIN	Externe	.
. Moving from PB 4 to PB 5	P	2,	MARIN	Externe	.
. Managing performance under PB	P	1,	MARIN	Externe	.
. Mastering Data Windows	P	2,	MARIN	Externe	.
. Data Windows Advanced	P	2,	MARIN	Externe	.
. Building Object-Oriented Applications with Powerbuilder	P	3,	MARIN	Externe	.
. Reporting with infomaker	P	2,	MARIN	Externe	.
. Data Modeling with S-Designer	P	2,	MARIN	Externe	.
. Design and implementing a GUI	P	2,	MARIN	Externe	.
. Application partitioning with Powerbuilder	P	2,	MARIN	Externe	.
. Best practices I: application design and standards	P	3,	MARIN	Externe	.
. Best practices II: application development	P	5,	MARIN	Externe	.
. Workshops	P	1,	MARIN	Externe	.
. - Developper Toolkit PB + Watcom C++	P	1,	MARIN	Externe	.
. - Using Oracle with Powerbuilder		2,	MARIN	Externe	.
. Workshop (selon l'actualité: performances, intégration. .)	C	1,	MARIN	Externe	.
- VISUAL BASIC					
. Overview	C	1,	MARIN	Externe	.
. Introduction	P	3,	MARIN	Externe	.
. Avancé	P	3,	MARIN	Externe	.
. Construction de serveurs OLE avec VB	P	2,	MARIN	Externe	.
. Workshop (selon l'actualité: intégration, connectivité..)	C	1,	MARIN	Externe	.
- FULCRUM SEARCHTOOLS					
. Powerbuilder tools	P	3,	DEASY (ff)	Externe	.
. Visual Basic tools	P	3,	DEASY (ff)	Externe	.
- MS-ACCESS					
. Overview	C	1,	MARIN	Externe	.
. Introduction	P	3,	MARIN	Externe	.
. Avancé	P	3,	MARIN	Externe	.
. Workshop (selon l'actualité:administration, connectivité...)	C	1,	MARIN	Externe	.
- ACUMEN					
. Introduction	P	3,	GROEMER	Externe	.
. Avancé	P	3,	GROEMER	Externe	.
. Fonctions spéciales	P	4,	GROEMER	Externe	.
- AREMOS					
. Introduction	P	2,	GROEMER	Externe	.
. Avancé	P	2,	GROEMER	Externe	.
. Programmation	P	2,	GROEMER	Externe	.
. Statistiques	P	2,	GROEMER	Externe	.
- SAS					
. Introduction	P	3,	GROEMER	Externe	.
. Langage des macros	P	1,	GROEMER	Externe	.
. Interface utilisateur	P	2,	GROEMER	Externe	.
INFORMATICS SECURITY OFFICERS (40)					
. Responsabilités et tâches des LISO	C	1,	BREMAUD	(BS)	A.09
. Listes de contrôle UNIX	C	2,	BREMAUD	Externe	.
. Sécurité dans la construction des SI	C	1,	BREMAUD	Externe	.
ENCADREMENT INFORMATIQUE (80)					
[4]					
. Schéma directeur et procédures	C	0,5	(IRM/DI)	CABALLERO - BROUSMICHE	A.09
. Vision du marché informatique					
. Computer Channel	A	var	BROUSMICHE	Vidéocassettes	.
. Visites d'experts, séminaires sur l'état de l'art	C	var	(IRM/DI)	Externes	A.10

REMARQUES

[1] Les références A.01, A.08, A.09, A 10, A.12 se rapportent au Programme Annuel de Formation de la Commission

[2] Programme à élaborer

[3] Les informaticiens suivent aussi le marché (formation chez les constructeurs, les sociétés de service..)

[4] Le personnel d'encadrement informatique suit aussi le programme général de management de la Commission (chapitre A.12) du programme annuel).

CONVENTION : méthodes

A : Autoformation

C : Cours / Conférence

P : cours Pratique

MM/YY : date de mise en production

PO : Phase-Out prochaine

LIST OF PRODUCT FAMILIES					
PRODUCT FAMILY	PRODUCT FAMILY MANAGERS				Interlocutors
	DG		DI		RUC
SERVERS and SERVER OPERATING SYSTEMS	H. WAGNER	DG 17-L	J.P. LAMBOT	DI-STB	N. HILBERT
WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS	H. DE SADELEER (f.f.)	DG 13	F. GARCIA MORAN (f.f.)	DI-STB	N. HILBERT
PRINTERS / PLOTTERS / SCANNERS and OFFICE EQUIPEMENTS (fax, photocopier, ..)	T. CUNNINGHAM	DG 11	J. LOCQUET	DI-SLF	N. HILBERT
SYSTEM MANAGEMENT PRODUCTS	P. HIRN	DG 2	N.NOSBUSCH	DI-CC	N. HILBERT
LAN MANAGEMENT PRODUCTS	R. KROMMES	DI-IRM	M. JORTAY	DI-STD	N. HILBERT
TELECOMMUNICATION SERVICES	A. RODRIGUEZ	OSCE	K. DE VRIENDT (f.f)	DI-STD	Ph. GARANT
ELECTRONIC MAIL, FILE TRANSFER and DIRECTORIES	F. KODECK	SG	G. SCHÄFER	DI-STD	Ph. GARANT
DESKTOP, WORKGROUP and WORKFLOW APPLICATIONS	P. VERLEYSEN	SDT	L. TOSSOUNIDIS	DI-STB	Ph. GARANT
DATABASE MANAGEMENT SYSTEMS and DEVELOPMENT TOOLS	A DE BACKER	DG 12	J. MARIN	DI-STB	K. MARTIN
INFORMATION SYSTEM INFRASTRUCTURE SOFTWARE and PACKAGES	-----		-----		K. MARTIN
DOCUMENT STORAGE, RETRIEVAL and HANDLING SYSTEMS	F. CRUCKE	DG 10	H.-G KOHL	DI-SSI	Ph. GARANT
DISSEMINATION PACKAGES and TP-MONITORS	D. MAC'CANN	SPP	P. DE CONINCK	DI-CC	K. MARTIN
INTERNET and INTRANET TOOLS	F. CRUCKE	DG 10	P. DE CONINCK	DI-CC	K. MARTIN
PROJECT MANAGEMENT TOOLS, EXECUTIVE INFORMATION SYSTEMS, DATA ANALYSIS and MODELLING SYSTEMS	J.-P. BUISSERET	DG 19	T. GRÖMER	DI-SSI	K. MARTIN
SECURITY PRODUCTS	-----		G. BREMAUD	BS	Ph. GARANT

Product family SERVERS and SERVER OPERATING SYSTEMS			Product family managers		
Product LOCAL SERVERS and OPERATING SYSTEMS			H. WAGNER	DG-XVII-L	
			J.P. LAMBOT	DI-STB	
Product name	CPU Model	Operating System	CI	Stat	Comments
BULL DPX 2/3x0	Motorala 680x0	BOS 2	B	AD	
BULL DPX 20	IBM POWER	AIX 3.2.x	B	OP	
BULL Escala Mxxx, Dxxx, Rxxx	PowerPC	AIX 4.1	B	OP	
BULL Z-server LT, EX and MXP	INTEL 486/Pentium	SCO ODT 3 Unixware	B B	OP OP	
COMPAQ Deskpro, Systempro / Prosignia	INTEL 486	SCO ODT 3	B	AD	
DEC 433, 450, PCT	INTEL 486	SCO ODT 3	B	OP	
DEC Prioris HX xxxxMP / Prioris ZX	INTEL Pentium	SCO OS 5	B	OP	
DEC 5x00	MIPS R3000	ULTRIX V.4	B	AD	
DEC AlphaStation 3000	DEC AXP	Digital Unix	B	OP	
DEC AlphaServerlxxx / 2xxx / 4xxx / 8xxx	DEC AXP	Digital Unix	B	OP	
HP9000 D-Class Enterprise Server (Model Dxxx)	PA - 7200	HP-UX 10.10	B	EV	Projets-pilotes EDMS
HP9000 K-Class Enterprise Server (Model Kxxx)	PA - 7200, PA-8000	HP-UX 10.xx	B	EV	Projets-pilotes EDMS
HP NetServer 6/xxx and 5/xxx	Intel PentiumPro	Windows NT	B	EV	Projets-pilotes EDMS
ICL DRS 6000 level xxx	SPARC	DRS / NX V7	B	AD	
ICL FX486,MX486	INTEL 486	UNIX ODT 3 / Unix V.4	B B	OP OP	
ICL F5/60	Intel Pentium	SCO ODT 3	B	OP	
ICL TeamServer Exxxi / Hxxxi	INTEL 486/Pentium	NX V7 / SCO ODT 3	B B	OP OP	
ICL SuperServer Hxxxx / Kxxxx	SPARC	NX V7 MPlus	B	OP	
NCR TOWER 32 xxx	MOTOROLA 680x0	TOS	B	AD	
NCR 34xx / 35xx	INTEL 486/Pentium	UNIX SRV4	B	OP	
NCR Entry Level Servers Sxx	Intel Pentium	UNIX SRV4	B	OP	
NCR WorldMark 4xxx	Intel Pentium	UNIX SRV4	B	OP	
OLIVETTI 3B2 xxx/1000	WE32000	UNIX V.3.2	B	AD	
OLIVETTI LSX 5010 / 5015 / 5020 / 5025(E) / 5030	INTEL 486	SCO ODT 3 / Unix V.4	B B	OP OP	
OLIVETTI LSX 5040 / 5050	Intel 486 / Pentium	SCO ODT 3 / Unix V.4	B B	OP OP	
OLIVETTI LSX 65xxx	MIPS R3000/R4400	DC/OSX	B	OP	Pyramid Server
OLIVETTI, SNX Systema xxx	INTEL Pentium	SCO ODT 3 SCO OS 5	B B	OP OP	
OLIVETTI NetStrada 7000	Intel PentiumPro	Windows NT	B	EV	Experiences-pilotes NTP
SNI MX 300 NSC / 500-xx NSC	NS32532	SINIX V 5.2	B	AD	
SNI MX 300i / 500-90	INTEL 486	SINIX V 5.4	B	AD	
SNI PCE 4/5	INTEL 486/Pentium	SCO ODT 3	B	OP	
SNI Primergy xxx	Intel Pentium	SCO OS 5	B	OP	
SNI RM 400 / 600	MIPS R4400	SINIX V 5.4	B	OP	

Product family SERVERS and SERVER OPERATING SYSTEMS			Product family managers		
Product LOCAL SERVERS and OPERATING SYSTEMS			H. WAGNER	DG-XVII-L	
			J.P. LAMBOT	DI-STB	
Product name	CPU Model	Operating System	CI	TS	Comments
SNI-Pyramid Nile 100/150	MIPS R4400	DC/OSX	B	OP	
SUN SPARCdesktop / Station / Server ELC, LX, IPC, IPX, 1+, 2 and 3 (modèles 3/xx[x] et 4/xx[x])	Sparc	SunOS 4.1 Solaris 2.x	C B	AD AD	
SUN SparcStation 4 / 5 and SparcServer 4 / 5	MicroSparc-II	SOLARIS 2.x	B	OP	
SUN SparcStation 10 / SparcServer 10	SuperSparc	SunOS 4.1 Solaris 2.x	C B	OP OP	
SUN SparcStation 20 / SparcServer 20	SuperSparc+	SunOS 4.1 SOLARIS 2.x	C B	OP OP	
SUN SparcServer 1000 / SparcServer 2000	SuperSparc	SOLARIS 2.x	B	OP	
SUN Enterprise 1 / 2 (UltraServer 1 / 2)	UltraSparc	SOLARIS 2.x	B	OP	
SUN Enterprise 3000 / 4000 / 5000	UltraSparc	SOLARIS 2.x	B	OP	

Product family SERVERS and SERVER OPERATING SYSTEMS			Product family managers		
Product CENTRAL SERVERS and OPERATING SYSTEMS			H. WAGNER	DG-XVII-L	
			J.P. LAMBOT	DI-STB	
Product name	CPU Model	Operating System	CI	TS	Comments
AMDAHL 5995-2570M	IBM System 390	VM/ESA	B	PO	DI-CC
AMDAHL 5995-2570M	IBM System 390	MVS/ESA	B	PO	DI-CC
BULL DPS 9000	-	GCOS 8	B	PO	DI-CC
CRAY 6400E	SuperSparc	Solaris 2.5.1	B	OP	DI-CC
SIEMENS H130-A		BS2000 - v10 OSD1 OSD2	B	PO	DI-CC
SNI Pyramid Nile 1000	MIPS R4400	Reliant UNIX 5.43	B	OP	DI-CC
SUN 3000	SuperSparc	Solaris 2.5.1	B	OP	DI-CC

Seuls sont repris les modèles de serveurs UNIX installés au Centre de Calcul et qui ne figurent pas dans la liste des serveurs locaux.

TS = Statuts technologiques:

- EV = Equipement en évaluation
- OP = Equipement opérationnel
- PO = Equipement en Phase-Out technologique
- AD = Equipement susceptible de radiation de l'inventaire

Product family WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS					Product family managers H. DE SADELEER (f.f.) DG XIII F. GARCIA MORAN ff DI-STB
Product WORKSTATIONS					
Product name	CI	TS	AS	Environments	Comments
BULL ZDS 425SH+(80486SX)	B	PO	AD	MS-DOS 5.0/ MS-WINDOWS 3.1	
BULL ZDS 433DH+ (80486DX)	B	PO	AD	MS-DOS 5.0/ MS-WINDOWS 3.1	
COMPAQ DeskPro 486SX (80486SX)	B	PO	AD ¹	MS-DOS 5.0/ MS-WINDOWS 3.1	
COMPAQ Deskpro 486DX33	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
ERICSON	B	PO	AD	MVS/ESA, VM/CMS	
IBM 327x	C	PO	AD	MVS/ESA, VM/CMS	
ICL CS386S (80386SX)	B	PO	AD	MS-DOS 5.0/MS-WINDOWS 3.1	
ICL CX386 (80386DX)	B	PO	AD ¹	MS-DOS 5.0/MS-WINDOWS 3.1	
ICL D4/XGi (80486SX)	B	PO	AD	MS DOS 5.0/MS-WINDOWS 3.1	
ICL D4/66d XG (80486DX)	B	PO	AD	MS-DOS 5.0/MS-WINDOWS 3.1	
ICL e450-75 (Pentium 75 MHz)	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
ICL e450-100 (Pentium 100 MHz)	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
NCD X-Terminals	C	OP	OP	UNIX SCO/OPEN DESKTOP, SunOS, SOLARIS, ULTRIX, OSF/1	
OLIVETTI M380, M386 (80386DX)	B	PO	AD	MS DOS 5.0/MS WINDOWS 3.1	
OLIVETTI M300-30 (80486SX)	B	PO	AD ¹	MS-DOS 5.0/MS-WINDOWS 3.1	
OLIVETTI M300-40, M333, M400, M440, M4-66, M6-460 (80486DX)	B	PO	AD	MS-DOS 5.0/MS-WINDOWS 3.1	
OLIVETTI Philos 42,Philos 48 (80486DX)	B	OP	OP	MS-DOS 5 0/MS-WINDOWS 3.1	
OLIVETTI ECHOS P75 (Pentium75 MHz)	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
OLIVETTI M4-75 (Pentium 75MHz)	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
OLIVETTI M4-90 (Pentium 90 MHz)	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
OLIVETTI M4-100 (Pentium 100 MHz)	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
OLIVETTI M4-P166 (Pentium 166 MHz)	B	OP	NA	MS-DOS 5.0/MS-WINDOWS 3.1	
SNI PDC-3M (80386DX)	B	PO	AD	MS-DOS 5.0/MS-WINDOWS 3.1	
SNI PCD-4GSX, PCD-4RSX (80486SX)	B	PO	AD ¹	MS DOS 5.0/MS-WINDOWS 3.1	
SNI PCD-4H (80486DX)	B	PO	AD	MS DOS 5.0/MS-WINDOWS 3.1	
SNI PCD-4ND (80486DX)	B	OP	OP	MS-DOS 5 0/MS-WINDOWS 3.1	
SNI Scenic Prom5/166 (Pentium 166 MHz)	B	OP	NA	MS-DOS 5.0/MS-WINDOWS 3.1	
SNI TANDBERG	B	PO	AD	MVS/ESA, VM/CMS, BS2000	
SNI 975x	B	PO	AD	BS2000	
TI Notebook active matrice	B	OP	OP	MS-DOS 5.0/MS-WINDOWS 3.1	
DEC X-Terminals	C	OP	OP	ULTRIX, OSF/1	

TS = Statuts technologiques:

EV = Equipement en évaluation
 OP = Equipement opérationnel
 PO = Equipement en Phase-Out technologique

AS = Statuts administratifs, octroyés par le Comité de renouvellement d'équipements informatiques:

NA = Equipement à acheter
 OP = Equipement opérationnel
 AD = Equipement susceptible de radiation de l'inventaire

⁽¹⁾Statut AD à condition que les configurations soient dans leur état de départ

Product family WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS				Product family managers H. DE SADELEER (f.f.) DG XIII F. GARCIA MORAN ff DI-STB	
Product CLIENT OPERATING SYSTEMS					
Interface, protocol, standard, etc.	CI	TS	Environments	Comments	
WIN32	A	EV	MS WINDOWS	Evaluation in the framework of the "Next Technological Platform" project	
Product name	CI	TS	Environments	Comments	
WINDOWS 95		EV	PC INTEL hardware architecture	Running-in in the framework of the "Next Technological Platform" project	
MS WINDOWS NT Workstation 4.0		EV	PC high end INTEL or RISC	Running-in in the framework of the "Next Technological Platform" project	
MS DOS 5.x	B	PO	PC INTEL hardware architecture	To be replaced by Windows 95 and/or Windows NT Workstation 4.0	
MS WINDOWS 3.1	B	PO	PC INTEL hardware architecture	To be replaced by Windows 95 and/or Windows NT Workstation 4.0	

Product family WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS				Product family managers H. DE SADELEER (f.f.) DG XIII F. GARCIA MORAN ff DI-STB	
Product LAN INTEGRATION PRODUCTS					
Interface, protocol, standard, etc.	CI	TS	Environments	Comments	
OSF DCE	A	EV			
NETBIOS	A	OP			
OLE 2.0	A	OP			
SMB	A	OP			
TCP/IP	A	OP			
WINSOCKETS	A	OP			
X 25	A	OP			
Product name	CI	TS	Environments	Comments	
PC-NFS PRO		EV		Evaluation in the framework of the "Next Technological Platform" project	
PC-NFS 5.x	B	OP	Local: MS DOS, MS WINDOWS		
LAN MANAGER 2.x Server	B	OP	Local: UNIX V.4: ICL, NCR, OLI, SNI, ULTRIX: DEC UNIX SCO		
MS LAN MANAGER 2.x Client	B	OP	Local: MS DOS, MS WINDOWS		
MS TCP/IP	B	OP	Local: MS DOS, MS-WINDOWS		
NFS	B	OP	Local: BOS/X: BULL, OSF/1: DEC SOLARIS 2.x (SUNOS 5 x): SUN		
NFS	B	OP	CC: BS 2000, MVS/ESA, VM/XA,	Running on a PO OS	
			CC: UTS, UNIX V 4		
			Local: UNIX V.3.2, ULTRIX: DEC	Running on a PO OS	
			Local: UNIX V.4: ICL, NCR, OLI, SNI, UNIX SCO		
NFS	C	OP	Local: SUNOS 4.x: SUN	Running on a PO OS	

Product family WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS				Product family managers H. DE SADELEER (f.f.) DG XIII F. GARCIA MORAN ff DI-STB
Product EMULATORS				
Interface, protocol, standard, etc.	CI	TS	Environments	Comments
3270	A	OP		
9750	A	OP		
Telnet	A	OP		
VT 220	A	OP		
X 11.5 or higher	A	OP		
X WINDOWS	A	OP		
Product name	CI	TS	Environments	Comments
eXceed/W	B	OP	MS WINDOWS	
IRISoft 220	B	OP	MS DOS	
LOG - WS (9750 emulator)	B	OP	MS WINDOWS	
RUMBA 3270	B	OP	MS WINDOWS	
TerWinal	B	OP	MS WINDOWS	
Adv. Telnet	C	OP	MS DOS	
SIMPC	C	OP	MS DOS	

Product family PRINTERS/PLOTTERS/SCANNERS and OFFICE EQUIPMENTS (fax, photocopier, ..)					Product family managers T. CUNNINGHAM DG 11 J. LOCQUET DI-SLF	
Product PRINTERS / PLOTTERS / SCANNERS						
Interface, protocol, standard, etc.	CI	TS	AS	Environnements		Comments
ADOBE POSTSCRIPT	A	OP				
HP-PCL 3	A	OP				
HP-PCL 4	A	OP				
HP-PCL 5	A	OP				
Product name	CI	Stat		Environnements		Comments
Kodak Diconix	B	PO	AD	MS DOS/MS WINDOWS		Portable
HP DeskJet 310, 320	B	OP	OP	MS DOS/MS WINDOWS		Portable; HP-PCL3
HP DeskJet 340	B	OP	NA	MS DOS/MS WINDOWS		Portable, HP-PCL3
HP DeskJet Plus	B	OP	AD	MS DOS/MS WINDOWS		Personnal; HP-PCL3
HP DeskJet 500	B	PO	AD	MS DOS/MS WINDOWS		Acquisitions de 90 et 91
HP DeskJet 500, 510, 520, 540	B	OP	OP	MS DOS/MS WINDOWS		Personnal; HP-PCL3
HP DeskJet 600, 690	B	OP	OP	MS DOS/MS WINDOWS		Personnal, HP-PCL3
HP LaserJet IIP, IIL	B	PO	AD	MS DOS/MS WINDOWS		Personnal; HP-PCL5
QMS PS410	B	OP	AD	MS DOS/MS WINDOWS		Personnal; Postscript ou HP-PCL5
HP LaserJet IIIP	B	PO	AD	MS DOS/MS WINDOWS		Acquisitions de 90 et 91
HP LaserJet IIIP	B	OP	OP	MS DOS/MS WINDOWS		Personnal; HP-PCL5
HP LaserJet IVL	B	OP	OP	MS DOS/MS WINDOWS		Personnal; HP-PCL5
HP LaserJet VL,VIP	B	OP	NA	MS DOS/MS WINDOWS		Personnal; HP-PCL5
HP LaserJet, LaserJet II (&SNI PT10, Olivetti PG208), LaserJet IID	B	OP	AD	UNIX / NT		Shared; HP-PCL4
QMS PS800, PS810	B	OP	AD	UNIX / NT		Shared; HP-PCL5 ou Postscript
Olivetti PG201	B	OP	AD	UNIX / NT		Shared
HP LaserJet III/PS	B	PO	AD	UNIX / NT		Shared; HP-PCL 4 ou Postscript
HP LaserJet IV,IVM,IV Plus, IVM Plus	B	OP	OP	UNIX / NT		Shared; HP-PCL 5 ou Postscript
HP LaserJet V,VN,VM	B	OP	NA	UNIX / NT		Shared; HP-PCL 6 ou Postscript
HP LaserJet 4Si/SiMX	B	OP	OP	UNIX / NT		Shared, HP-PCL5 ou Postscript
HP LaserJet 5 Si/SiMX	B	OP	NA	UNIX / NT		Shared; HP-PCL5 ou Postscript
HP DeskJet 5x0C, 660C,850C	C	OP	OP	MS DOS/MS WINDOWS		Personnal Color; HP-PCL3
HP DeskJet 870Cxi	C	OP	NA	MS DOS/MS WINDOWS		Personnal Color; HP-PCL3
HP DeskJet 1x00C/CPS	C	OP	NA	MS DOS/MS WINDOWS/UNIX		HP-PCL3
HP SCANJET IIP, IIIP	B	OP	OP	MS DOS/MS WINDOWS		
HP SCANJET IIC, IICx, IIIC	C	OP	OP	MS DOS/MS WINDOWS		
MT 660/690	B	OP	OP	UNIX		
OCE 66xx	B	OP	OP	UNIX		HP-PCL 5 ou Postscript
QMS SMARTWRITER	B	PO	AD	UNIX		
QMS SMARTWRITER Plus	B	PO	AD	UNIX		
SNI 9014	B	OP	OP	MS DOS/MS WINDOWS		Multicopy forms printing

Product family PRINTERS/PLOTTERS/SCANNERS and OFFICE EQUIPMENTS (fax, photocopier, ..)					Product family managers T. CUNNINGHAM DG 11 J. LOCQUET DI-SLF	
Product PRINTERS / PLOTTERS / SCANNERS						
Product name	CI	TS	AS	Environments	Comments	
TI (XL) PS 17 / PS 35	B	OP	OP	UNIX	Postscript	
OLIVETTI PRxx, DMxxx	B	PO	AD	MS DOS/MS WINDOWS	Single form printing	
SNI 3/4xxx	B	PO	AD	MS DOS/MS WINDOWS		
OLIVETTI DM 624	C	OP	OP	MS DOS/MS WINDOWS	Multicopy forms printing	

TS = Statuts technologiques :

EV = équipement en évaluation

OP = équipement opérationnel

PO = équipement en phase-out technologique

AS = Statuts administratifs, octroyés par le Comité de renouvellement d'équipements informatiques :

NA = équipement à acheter

OP = équipement opérationnel

AD = équipement susceptible de radiation de l'inventaire

Product family PRINTERS/PLOTTERS/SCANNERS and OFFICE EQUIPMENTS (fax, photocopier,)				Product family managers	
Product OFFICE EQUIPMENTS (fax, photocopier, ...)				T. CUNNINGHAM	DG 11
				J. LOCQUET	DI-SLF
Product name	Cl	Stat	Environments	Comments	
CANON L500, L600	B	OP	FAX		
ADLER 1121, 1428	B	PO	Office calculator		
OLIVETTI LOGOS 452, 384	B	PO	Office calculator		
CITIZEN 440 DP	B	OP	Office calculator		
NASCO 2400	B	OP	Office calculator		
PRECISA 5700	B	PO	Office calculator		
AGFA X58S	B	PO	Photocopier	20 - 30 Kcop/month; 50 A4/m (1)	
AGFA X88S, X800	B	PO	Photocopier	30 - 36 Kcop/month; 80 A4/m (1)	
AGFA X310	B	OP	Photocopier	5 - 20 Kcop/month 35 A4/m (1)	
CANON CLC200, CLC350	B	PO	Photocopier	4 - 8 Kcop/month, 5 A4/m (6)	
CANON CLC500, CLC700	B	PO	Photocopier	4 - 8 Kcop/month; 5 A4/m (7)	
CANON NP1010, NP6010	B	PO	Photocopier	0,5 - 1,5 Kcop/month, 10 A4/m	
CANON NP1520, NP1550	B	PO	Photocopier	2 - 4 Kcop/month; 15 A4/m	
CANON NP3325, NP6030	B	PO	Photocopier	6 - 10 Kcop/month, 25 A4/m (2)	
CANON NP4335, NP6835, NP4050	B	PO	Photocopier	12 - 18 Kcop/month; 35 A4/m (1)	
CANON NP6650, NP5060, NP6850	B	PO	Photocopier	20 - 30 Kcop/month; 50 A4/m (1)	
CANON NP8580, NP8530	B	PO	Photocopier	50 - 75 Kcop/month; 82 A4/m (1)	
CANON NP6050	B	OP	Photocopier	20 - 35 Kcop/month 50 A4/m (1)	
CANON NP6062	B	OP	Photocopier	35 - 55 Kcop/month 62 A4/m (1)	
CANON NP6085	B	OP	Photocopier	55 - 100 Kcop/month 85 A4/m (1)	
KODAK 300 AF	B	PO	Photocopier	250 - 600 Kcop/month; 100 A4/m (1)	
KODAK A1	B	PO	Photocopier	400 - 800 Kcop/month, 110 A4/m (1)	
KODAK A2	B	PO	Photocopier	400-800 Kcop/month;110 A4/m (1)(4)	
KODAK B2	B	PO	Photocopier	100-250 Kcop/month; 70 A4/m (1)(8)	
KODAK Color Edge	B	PO	Photocopier	8 - 80 Kcop/month; 23 A4/m (5)	
MINOLTA EP1050	B	OP	Photocopier	0 - 5 Kcop/month 15 A4/m (1)	
NASHUA 7125S	B	PO	Photocopier	6 - 10 Kcop/month, 25 A4/m (2)	
NASHUA 8112, 3213S	B	PO	Photocopier	0.5 - 1,5 Kcop/month; 12 A4/m	
NASHUA 8112 RE, 3213, 3413	B	PO	Photocopier	2 - 4 Kcop/month, 12 A4/m	
OCE 2400	B	PO	Photocopier	> 75 Kcop/month; 60 A4/m (1)	
OCE 2600	B	OP	Photocopier	100 - 500 Kcop/month 100 A4/m (1)	
RANK XEROX 1065 C	B	PO	Photocopier	36 - 75 Kcop/month, 62 A4/m (1)	
RANK XEROX 1090, 5088	B	PO	Photocopier	100 - 250 Kcop/month; 92 A4/m (1)	
RANK XEROX 5065, 5365	B	PO	Photocopier	36 - 75 Kcop/month, 62 A4/m (1)	
RANK XEROX 5090, 5390	B	PO	Photocopier	400-900 Kcop/month,135 A4/m (1)(3)	
RANK XEROX Century 5100	B	PO	Photocopier	100 - 350 Kcop/month; 100 A4/m (1)	

Product family PRINTERS/PLOTTERS/SCANNERS and OFFICE EQUIPMENTS (fax, photocopier,)				Product family managers	
Product OFFICE EQUIPMENTS (fax, photocopier, ...)				T. CUNNINGHAM	DG 11
				J. LOCQUET	DI-SLF
RANK XEROX 5690	B	OP	Photocopier	> 500 Kcop/month 135 A4/m (1)	
RANK XEROX Docutech	B	OP	Photocopier	> 500 Kcop/month 135 A4/m (1)	
Assmann M800,M205,MC8	B	OP	REP. Cassette		
DICTAPHONE 270	B	OP	REP. Cassette		
PHILIPS LFH 2505	B	PO	REP. Cassette		
OLIVETTI L93,ET112,ET121	B	PO	Typewriter		
OLYMPIA ES106, SGE75	B	PO	Typewriter		
TA 400	B	PO	Typewriter		
TRIUMPH-ADLER TA 410	B	OP	Typewriter		

- (1) Automatic feeding, sorting, two-sided copying
- (2) Automatic feeding
- (3) On-line binding
- (4) Addressing, zones treatment, "mode cachet"
- (5) Color centralized service
- (6) Color decentralized service, basic modification of original
- (7) Color decentralized service, advanced modification of original
- (8) Zones treatment

Product family SYSTEM MANAGEMENT PRODUCTS				Product family managers	
Product SYSTEM MANAGEMENT PRODUCTS				P. HERN	DG II
				N. NOSBUSCH	DI-CC
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
OSF DME	A	EV		OSF branding	
SNMP	A	OP			
Product name	Cl	Stat	Environments	Comments	
TIVOLI TME		EV	UNIX (SOLARIS 2.1)	Evaluation at OSCE ongoing	
CAPACITY NetCon	B	OP	Local: MS DOS / MS WINDOWS		
SOFTWARE DISTRIBUTION	B	PO	Local: MS WINDOWS	replaced by NetCon	

Product family LAN MANAGEMENT PRODUCTS				Product family managers	
Product LAN MANAGEMENT PRODUCTS				R. KROMMES	DI-IRM
				M. JORTAY	DI-STD
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
SNMP	A	OP			
Product name	Cl	Stat	Environments	Comments	
Expert Sniffer Network Analyser	B	OP			
LanProbe II	B	OP			
Open View Network Node Manager	B	OP	UNIX/MOTIF		
Probeview/SNMP	B	OP	MS WINDOWS		
LAN Analyser	C	PO			

Product family TELECOMMUNICATION SERVICES				Product family managers A. RODRIGUEZ OSCE K. DE VRIENDT (f.f) DI-STD	
Product ELECTRONIC MAIL GATEWAY - PAX400					
Interface, protocol, standard, etc.	CI	Stat	Environments	Comments	
FAX G3	A	OP		outgoing only	
TELEX	A	OP		In/out	
X 400 84	A	OP		In/out	
X 400 88	A	OP		In/out	
SMTP	A	OP	E-Mail with Internet		
Product name	CI	Stat	Environments	Comments	
EMS		OP	UNIX	Serveur MTA X 400	
EMX		OP	UNIX	Access point X 400 88 / SMTP	
GEM400		OP	UNIX	GW X 400- SESAM	
SESAM	B	OP	VMS	GW GEM400- FAX/TLX	

Product family TELECOMMUNICATION SERVICES				Product family managers A. RODRIGUEZ OSCE K. DE VRIENDT (f.f) DI-STD	
Product FILE TRANSFER GATEWAY - FTRG					
Interface, protocol, standard, etc.	CI	Stat	Environments	Comments	
FTAM	A	OP		External/internal (EV)	
FTP	A	OP		External/internal	
KERMIT	A	OP	UNIX	External	
NIFTP	A	PO	MFTS	External/internal	
UUCP	A	OP	UNIX	External	
Product name	CI	Stat	Environments	Comments	
FTAM	B	OP	UNIX	NCR product	
FTRG	B	OP	UNIX	GW FTP/MFTS- UUCP/KERMIT/FTAM/MFTS	
FT-MAIL	B	OP	UNIX	GW ILS-FTRG	
MFTS	B	PO	UNIX		

Product family TELECOMMUNICATION SERVICES			Product family managers A. RODRIGUEZ OSCE K. DE VRIENDT (f.f.) DI-STD	
Product INTERACTIV ACCESS GATEWAY - GWI				
Interface, protocol, standard, etc.	CI	Stat	Environments	Comments
X.3	A	EV	Interactiv access to / from DG. X.25	
TELNET	A	EV	Interactiv access to / from DG. TCP/IP	
Product name	CI	Stat	Environments	Comments
GW		EV	Interactiv access to / from DG	

Product family TELECOMMUNICATION SERVICES			Product family managers A. RODRIGUEZ OSCE K. DE VRIENDT (f.f.) DI-STD	
Product CLIENT / SERVER GATEWAY				
Interface, protocol, standard, etc.	CI	Stat	Environments	Comments
TCP/IP	A	EV		
Product name	CI	Stat	Environments	Comments
IPGATE		EV		

Product family ELECTRONIC MAIL, FILE TRAFER and DIRECTORIES				Product family managers F KODECK SG G SCHÄFER DI-STD	
Product ELECTRONIC MAIL					
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
X/Open API (MT)	A	EV	UNIX SCO	Specific gateways E-MAIL	
CMC	A	OP	UNIX	Applications on UNIX/DOS	
ILS-API	A	PO	MS DOS, UNIX	Application development	
MAPI	A	OP	MS DOS/ MS WINDOWS	Applications on MS DOS/MS WINDOWS	
Teletex	A	PO	UNIX systems to which ILS Server is ported	Transfer format for INSEM 1	
X 400 84	A	OP	UNIX SCO	Gateway ILS-X 400 TC	
X 400 88	A	OP	UNIX SCO	General E-MAIL for the EC including protocols like P1, P7	
X 435	A	EV	UNIX	EDI applications	
Product name	Cl	Stat	Environments	Comments	
Route400 Management System		EV	MS DOS/MS WINDOWS	INSEM 2 central administration tool, Destination is Class B	
Route400 MTA	B	OP	UNIX SCO		
Route400 UA	B	OP	UNIX, MS DOS/MS WINDOWS	Graphical and character-mode user interfaces, Destination Class is B	
ILS Client	B	PO	Same as ILS Server + UNIX V.4 DRS 6000, ULTRIX DEC, UNIX, V.4 OLI LSX 50xx, MS DOS		
ILS Server	B	PO	UNIX SCO, UNIX V 3.2 NCR Tower (PO), UNIX V.4 NCR 3000, UNIX V 3 2 AT&T 3B2 (PO), BOS/X DPX/2 (PO), SUNOS	Character-mode; SUNOS 4 x is Class C PO; SUNOS 5 x is Class B OP	
ILS-X 400 Gateway	B	PO	UNIX SCO	Gateway ILS - X 400 TC	
WinILS	B	PO	MS DOS/MS WINDOWS		
LIFELINE	C	PO	SUNOS	OSCE	
MS MAIL	C	PO	MS DOS/MS WINDOWS	DG 3, DG 13, DG 15, DG 19	

Product family ELECTRONIC MAIL, FILE TRAFER and DIRECTORIES				Product family managers F. KODECK SG G SCHÄFER DI-STD	
Product FILE TRANSFER SYSTEMS					
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
FTAM	A	EV	OP au TC & DG 21		
FTP	A	OP	All OS on TCP/IP only	Not full multilingual	
IBG-API	A	OP	MFTS		
NIFTP	A	OP	MFTS		
Product name	Cl	Stat	Environments	Comments	
STATEL		EV	UNIX	OSCE; destination Class C	
IBG	B	OP	MFTS		
KERMIT	B	OP	UNIX- X25, RS232	Only for FTRG computer telecommunications center	
MFTS	B	OP	BS 2000, GCOS 8, MVS/ESA, VM/XA-VM/CMS	Running on a PO OS	
			UNIX		

Product family ELECTRONIC MAIL, FILE TRANSFER and DIRECTORIES				Product family managers F. KODECK SG G. SCHÄFER DI-STD	
Product DIRECTORIES					
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
X 500	A	EV			

Product family DESKTOP, WORKGROUP and WORKFLOW APPLICATIONS				Product family managers P. VERLEYSEN SDT L. TOSSOUNIDIS DI-STB	
Product DESKTOP APPLICATIONS					
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
UNICODE	A	EV			
OLE 2.0	A	OP			
Product name	Cl	Stat	Environments	Comments	
ACROBAT Pro	B	OP	MS WINDOWS	internal e-mail exchange usage to be defined	
ACROBAT Reader	B	OP	MS WINDOWS	for external e-mail exchange usage	
ADOBE ATM 2.0	B	OP	MS WINDOWS		
EXCEL 5.0	B	OP	MS WINDOWS		
MF WINDOWS 4 x	B	OP	MS WINDOWS	Multilingual kit	
POWER POINT 4.0	B	OP	MS WINDOWS		
VISIO for WINDOWS	B	OP	MS WINDOWS		
WORD for WINDOWS 2.0	B	PO	MS WINDOWS	see IRMB decision	
WORD for WINDOWS 6.0	B	OP	MS WINDOWS	see IRMB decision	
WP for WINDOWS 5.2	B	PO	MS WINDOWS	see IRMB decision	
COREL DRAW	C	OP	MS WINDOWS		
DESIGNER	C	PO	MS WINDOWS	replaced by VISIO for WINDOWS	
INTERLEAF	C	OP	UNIX, MS DOS		
VENTURA PUBLISHER	C	OP	MS WINDOWS		
WP 5.1	C	PO	UNIX/MOTIF	SCIC- see IRMB decision	

Product family DESKTOP, WORKGROUP and WORKFLOW APPLICATIONS				Product family managers P. VERLEYSEN SDT L. TOSSOUNIDIS DI-STB	
Product WORKGROUP and WORKFLOW APPLICATIONS					
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
ACROBAT	A	OP		internal e-mail exchange usage to be defined; for external e-mail exchange usage	
SGML	A	OP			
WORD for WINDOWS 6 0	A	OP		see IRMB decision	
WORDPERFECT 5.1	A	PO	EM Exchange format	see IRMB decision	
Product name	Cl	Stat	Environments	Comments	
CaLANdar	B	OP	MS WINDOWS		
Lotus-Organizer	C	PO	MS WINDOWS		
MS SCHEDULE +	C	PO	MS WINDOWS		

Product family DATA BASE MANAGEMENT SYSTEMS and DEVELOPMENT TOOLS				Product family managers A. DE BACKER DG XII J. MARIN DI-STB	
Product DATA BASE MANAGEMENT SYSTEM					
Interface, protocol, standard, etc.	CI	Stat	Environments	Comments	
DCE RPC	A	EV			
SQL*Net	A	OP	ORACLE		
SQL 1 (SQL-89)	A	OP		included in SQL 1	
SQL 2 (SQL-92)	A	OP			
SQL 3	A	EV			
Product name	CI	Stat	Environments	Comments	
Data Base Management Systems					
ADABAS C 2.2	B	PO	UNIX	no more a strategy	
ADABAS C 5.2	B	PO	BS 2000, MVS/ESA	Running on a PO OS. migration to UNIX not recommended. To see project by project	
ORACLE 6.0	B	PO	UNIX	migration to be planed	
ORACLE 7.3	B	OP	MS WINDOWS, UNIX	Last version 7	
ORACLE 7.3	B	EV	Win NT		
ORACLE 8.x	B	EV	Win 3.1, Win 95, Win NT, Unix		
SABINE	B	PO	CC. VM/CMS	Running on a PO OS	
Connectivity tools					
SQL*Net 2.3	B	OP	Win 3 1, Win 95, Win NT, UNIX		
SQL*Net 1	B	PO	MS WINDOWS, UNIX	linked to ORACLE 6 0	

Product family DATA BASE MANAGEMENT SYSTEMS and DEVELOPMENT TOOLS				Product family managers A. DE BACKER DG XII J. MARIN DI-STB	
Product DEVELOPMENT TOOLS					
Interface, protocol, standard, etc	CI	Stat	Environments	Comments	
DCE RPC	A	EV			
ODBC	A	OP	MS WINDOWS		
WINSOCKETS	A	OP			
Product name	CI	Stat	Environments	Comments	
Libraries and APIs					
ODBC 2	B	OP	MS WINDOWS		
ODBC 3	B	EV	Win 3.1, Win 95, Win NT		
3rd Generation Languages					
Java		EV	Win 3.1, Win 95, Win NT, Unix		
C	B	OP	All OS		
C++	B	OP	All OS		
MARKIT 2.2	B	OP	UNIX		
APL	C	OP	UNIX, MS DOS/MS WINDOWS	OSCE	
COBOL	C	OP	All OS		
FORTAN 77	C	OP	All OS		

Product family DATA BASE MANAGEMENT SYSTEMS and DEVELOPMENT TOOLS				Product family managers	
Product DEVELOPMENT TOOLS				A. DE BACKER	DG XII
				J. MARIN	DI-STB
4th Generation Environment					
DEVELOPERS 2000 1.3	B	OP	Win 3.1, Win 95, Win NT, Unix		
MS ACCESS 97	B	EV	Win 95, Win NT	Don't use MS ACCESS 95	
MS ACCESS 2.0	B	OP	MS WINDOWS	end-user tool	
NATURAL 2.2	B	OP	UNIX, Mainframes		
OSIRIS	B	PO	CC: MVS/ESA,VM/CMS	Running on a PO OS	
			CC: UNIX V.4		
POWERBUILDER 4.0	B	PO	MS WINDOWS	migration to be planned	
POWERBUILDER 5.0	B	OP	Win 3.1, Win NT, Win 95		
SQL*Forms 3, SQL*Report 1	B	PO	UNIX	Migration to be planned	
VISUAL BASIC 5.0	B	EV	Win 3.1, Win NT, Win 95		
VISUAL BASIC 3.0	B	PO	MS WINDOWS		
VISUAL BASIC 4.0	B	OP	MS WINDOWS		
DBASE IV for WINDOWS	C	OP	MS WINDOWS		
MS FOXPRO for WINDOWS	C	OP	MS WINDOWS		
Case tools					
S*DESIGNOR/AMC*DESIGNOR 5	C	OP	Win 3.1, Win NT, Win 95	training on demand	
DESIGNER 2000 (ex ORACLE*Case)1.3	C	OP	MS WINDOWS, Win 95, Win NT	training on demand	
Power*Designer 6	C	EV	Win NT, Win 95	New name for S*Designer	
Testing tools					
Win Runner	C	OP	WIN NT, Win 95	training on demand	
Configuration management tools					
PVCS	C	OP	Win 3.1, Win NT, Win 95	Recommended use: large projects and coordination of several small projects	
Source Safe 5	C	OP	Win NT, Win 95	Use specially with Microsoft tools	
Object* Cycle	C	EV	Win NT, Win 95	Only with Powerbuilder projects	

Product family INFORMATION SYSTEM INFRASTRUCTURE SOFTWARE and PACKAGES				Product family managers
Product INFORMATION SYSTEM INFRASTRUCTURE SOFTWARE and PACKAGES				
Product name	CI	Stat	Environments	Comments
ARC/INFO	B	OP	UNIX	Geographical IS
ASSYST	B	OP	UNIX	Administrativ Packages
BAVARIA	B	OP	BS 2000	Financial Packages; Running on a PO OS
ELS (OFFIS)	B	OP	UNIX	Administrativ Packages
MULTILIS	B	OP	UNIX	Administrativ Packages
MILLENIUMS	B	OP	CC: MVS/ESA	Finacial Packages; Running on a PO OS
MAPINFO	C	OP	MS WINDOWS	PC-Based Geographical Information System Product

Product family DOCUMENT STORAGE, RETRIEVAL and HANDLING SYSTEMS				Product family managers F. CRUCKE DG X H.-G KOHL DI-SSI	
Product DOCUMENT HANDLING SYSTEMS					
Product name	CI	Stat	Environments	Comments	
MISTRAL X		EV			
BASIS	B	PO	CC: BS 2000, VM/XA		
		PO	Local: UNIX		
EDMS	B	EV			
MISTRAL V	B	OP	CC: GCOS 8	Running on a PO OS	
SEARCHTOOLS (FULLCRUM 3.0)	B	OP	UNIX		
DORODOC	C	OP	UNIX- ORACLE		
OMNIPAGE	C	OP			
TEXIRIS	C	OP			

Product family DISSEMINATION PACKAGES and TP-MONITORS				Product family managers D. MAC CANN SPP P. DE CONINCK DI-CC	
Product DISSEMINATION PACKAGES					
Product name	CI	Stat	Environments	Comments	
DOCDIS (IDS)	B	OP	UNIX	Dissemination Packages	
INFOFACT (IDS)	B	OP	Client: MS DOS/MS WINDOWS Server: CC: UNIX V.4 ICL DRS 6000	Dissemination Packages	
INFOTEX (IDS)	B	OP	CC: BS 2000	Dissemination Packages, Running on a PO OS	
PRETEX	B	OP	UNIX	Dissemination Packages	
UFI-MISTRAL (IDS)	B	OP	MS WINDOWS	Dissemination Packages	

Product family INTERNET and INTRANET TOOLS				Product family managers F. CRUCKE DG X P. DE CONINCK DI-CC	
Product BROWSERS					
Product name	Cl	Stat	Environments	Comments	
NETSCAPE 3.0		EV	MS WINDOWS		
NETSCAPE 2.0	B	OP	MS WINDOWS		
NETSCAPE 1.22	B	PO	MS WINDOWS		

Product family INTERNET and INTRANET TOOLS				Product family managers F. CRUCKE DG X P. DE CONINCK DI-CC	
Product HTML editors					
Interface, protocol, standard, etc	Cl	Stat	Environments	Comments	
HTML 3.2	B	OP			
Product name	Cl	Stat	Environments	Comments	
HoTMetal PRO 3 0	B	OP	MS WINDOWS		
INTERNET ASSISTANT	B	PO	Word for WINDOWS		

Product family PROJECT MANAGEMENT TOOLS, EXECUTIVE INFORMATION SYSTEMS, DATA ANALYSIS and MODELLING SYSTEMS				Product family managers J.-P. BUISSETER DG XIX T. GRÖMER DI-SSI	
Product PROJECT MANAGEMENT TOOLS					
Product name	Cl	Stat	Environments	Comments	
MS PROJECT	B	OP	MS WINDOWS		
PROJECT MANAGEMENT WORKBENCH	B	PO	MS DOS		
PROJECT MANAGEMENT WORKBENCH	B	OP	MS WINDOWS		

Product family PROJECT MANAGEMENT TOOLS, EXECUTIVE INFORMATION SYSTEMS, DATA ANALYSIS and MODELLING SYSTEMS				Product family managers J.-P. BUISSETER DG XIX T. GRÖMER DI-SSI	
Product DATA ANALYSIS & MODELLING SYSTEMS					
Product name	Cl	Stat	Environments	Comments	
ESPERANT		EV		DG 8, 12	
E-VIEW		EV		DG 20	
IDA		EV		DG 2	
RATS		EV		DG 2	
FAME	B	OP	UNIX, MS WINDOWS 3.1	the product is available on Windows 95 and Windows NT	
SAS	B	OP	All platforms		
ACL	C	OP		DG 20 Audit control language	
ACUMEN	C	OP		OSCE	
AREMOS	C	OP		DGs 2, OSCE, 6 (?)	
TROLL	C	OP		DGs 2, 12, 17B (?)	

Product family SECURITY PRODUCTS				Product family managers	
Product SECURITY PRODUCTS				G. BREMAUD BS	
Interface, protocol, standard, etc.	CI	Stat	Environments	Comments	
DCE Security	A	EV	SERVER Operating Systems	OSF branding	
UNIX C2	A	OP	SERVER Operating Systems	Par BdS	
WINDOWS-NT (C2)	A	EV	SERVER Operating Systems	Par BdS, OSCE, DI	
GSS-API	A	EV	Security protocol (couche application)	Par DG 19, DI, BdS. Proposition OP	
SSL	A	EV	Security protocol (couche session-transport)	Par DI, BdS. Proposition OP	
S/MINE	A	EV	E-mail	Par BdS, DI	
PEM	A	EV	E-mail	Par BdS, DI	
RSA	A	EV	Cryptographie (asymétrique)	Par BdS, DG 19, DI. Proposition OP	
DES	A	EV	Cryptographie (symétrique)	Par BdS	
IDEA	A	EV	Cryptographie (symétrique)	Par BdS, DG 19, DI	
X509	A	EV	Certificats	Par BdS, DI. Proposition OP	
Product name	CI	Stat	Environments	Comments	
Version "sécurisé" de produits d'autres familles (Version sécurisée, séparée du produit, nécessitant une licence spéciale. Dans le cas contraire où les fonctions de sécurité sont livrées en standard, le produit n'est pas cité dans cette famille)					
ORACLE V7.x Secure (ou trusted ORACLE)	B	EV		Proposition OP	
SQL*Net 2.x	B	EV		Proposition OP	
NETSCAPE x.x	B	EV			
NFS 3.x	B	EV			
NIS+	C	EV			
Analyse de risques (Logiciels d'assistance pour audit)					
WIN-ARIES (PSI)	C	EV	MS DOS - WINDOWS 3.1 / 95	Par BdS - Support audit MARION	
MELISA V3 (CF6)	C	EV	MS DOS - WINDOWS 95 / NT	Par BdS - Support audit MELISA	
CRAMM (LOGICA)	C	EV	MS DOS - WINDOWS 3.1 / 95	Par BdS - Support audit CRAMM	
Plan de secours (Logiciels d'assistance pour plan de secours)					
TTA-PARAD (TTA)	C	EV	MS DOS - WINDOWS 95 / NT	BdS, CC, DG 08	
XT-BORA (EXPLOITIQUE)	C	EV	MS DOS - WINDOWS 95 / NT	BdS	
COMPASS (AGERIS)	C	EV	MS DOS - WINDOWS 95 / NT	BdS	
Identification / Authentification renforcée					
Carte à puce: SLE44CR80S (UTI MACO)	B	EV	MS DOS - WINDOWS 95 / NT - UNIX	Par DG 19, DI, BdS (Sincom2)	
Token (SECURE-ID, DIGIPASS, ...)	B	EV	MS DOS - WINDOWS 95 / NT - UNIX	Par BdS	
Contrôle d'accès					
SAFEGUARD Professional (UTI MACO)	C	OP	MS DOS - WINDOWS 95 / NT		
SAFEGUARD Easy (UTI MACO)	C	OP	MS DOS - WINDOWS 95 / NT		
LATCHES (RHEA)	C	EV	MS DOS - WINDOWS 95 / NT	DG 17 Lux	
SIS (TELIS)	C	EV	Réseau TCP/IP	OSCE, DI/STD, 21 Proposition OP	
DISKNET (REFLEX)	C	OP	MS DOS - WINDOWS 95 / NT	DG 21, 20	

Product family SECURITY PRODUCTS				Product family managers	
Product SECURITY PRODUCTS				G. BREMAUD BS	
Product name	Cl	Stat	Environnements	Comments	
Journalisation, Monitoring, Alerte					
Intruder Alert (AXENT TECHN.)	C	EV			
Brain Tree Security Software	C	EV			
Audit systems: Système UNIX					
TIGER-COPS-TRIPWIRE	B	OP	UNIX (SCO,SVR4,OSF1,BOS,AIX,SUN-OS, ULTRIX,SINIX,SOLARIS)	Par BdS (Version INTERNET révisée par BULL)	
PC-UNIX-Audit (INTRUSION DETECTION)	B	EV	MS DOS - WINDOWS 3.1 / 95	Par BdS	
Audit systems: Système Windows NT					
Kane Security Analyst	B	EV	WINDOWS NT	Par BdS	
Audit systems: Télécommunication UNIX et WINDOWS NT					
SATAN (NCR)	B	EV	Environnement LAN-UNIX-WINDOWS NT	Par BdS (Version INTERNET révisée par NCR)	
ISS-Scanner (ISS)	B	EV	Environnement LAN-UNIX-WINDOWS NT	Par BdS. Proposition OP	
Anti-virus					
Dr. SOLOMON (S&S Int.) WinGuard	B	OP	MS DOS - WINDOWS 95 / NT	Résident d'alerte (Licence forfaitaire)	
Dr. SOLOMON (S&S Int.)	B	OP	MS DOS - WINDOWS 95 / NT	Produit complet pour équipe support	
VIRUS SCAN (Mc Afee)	B	OP	MS DOS - WINDOWS 95 / NT	Produit complet pour équipe support	
SWEEP (SOPHOS)	B	OP	MS DOS - WINDOWS 95 / NT	Produit complet pour équipe support	
F-PROT (Frisk / DataFellows)	B	OP	MS DOS - WINDOWS 95 / NT	Produit complet pour équipe support	
Filtrage					
MIME Sweeper (REFLEX/INTEGRALIS)	B	EV	WINDOWS NT	Par DI/STD, BdS	
Cryptographie					
CryptWare Products (UTI MACO)	B	EV	MS DOS - WINDOWS 95 / NT	Par DI,DG 19, BdS(Sincom2,E-mail) Proposition OP	
Certification					
CryptWare Products (UTI MACO)	B	EV	MS DOS - WINDOWS 95 / NT - UNIX	Par DI,DG 19, BdS(Sincom2,E-mail) Proposition OP	
External providers	C	EV	MS DOS - WINDOWS 95 / NT - UNIX	Par BdS, DG 3 (Verisign, Eurosign, .)	
Firewalls					
Firewall-1 (Check point)	B	EV	Réseau	DI / STD, BdS	
Eagle Firewall (Raptor system)	B	EV	Réseau	DI / STD, BdS	
Gauntlet (TIS)	B	EV	Réseau	DI / STD, BdS	
Borderware (BORDER NETWORK TECHNOLOGIES)	C	EV	Réseau	Délégation Washington	

Product family SECURITY PRODUCTS				Product family managers	
Product SECURITY PRODUCTS				G. BREMAUD BS	
Interface, protocol, standard, etc.	Cl	Stat	Environments	Comments	
Single sign-on					
ISM Access Master (BULL)	B	EV	WINDOWS 3 1 / 95 / NT / UNIX / TCP/IP /	Par BdS	
Access manager (ICL, Platinum)	B	EV	WINDOWS 3.1 / 95 / NT / UNIX / TCP/IP / ..	Par BdS	
MyNet (CKS)	B	EV	WINDOWS 3.1 / 95 / NT / UNIX / TCP/IP /	Par BdS	
AviBok's (DYNASOFT)	B	EV	WINDOWS 3.1 / 95 / NT / UNIX / TCP/IP / ...	Par BdS	
Challenger (CYBERSAFE)	B	EV	WINDOWS 3 1 / 95 / NT / UNIX / TCP/IP /	Par BdS	
Enterprise Sign-On (AXENT TECHN.)	B	EV	WINDOWS 3.1 / 95 / NT / UNIX / TCP/IP / ...	Par BdS	
Sécurité physique (anti-vol, ...)					
Divers produits (SecuPlus)	C	EV		Par BdS	
Attach with cable (LOCK-IT)	C	EV	MS DOS	DG 8, BdS	
Matériel					
Cryptofax Philips	C	EV	Domaine Classifié	DG 1A Proposition OP	
Matériel Tempest	C	EV	Domaine Classifié		

COOPERATION ENTRE LA DI ET LES DG/SERVICES			
COMITES/GROUPES	PRESIDENT(S)	RAPPORTEUR	DG PARTICIPANTES [1]
COMITES			
Cellule de Pilotage des Schémas Directeurs	M BEURMS (DI) (ff)	M BEURMS (DI)	3,9,10,13/B,19,OSCE,SG
Comité Technique Informatique	MD FLESCHE	M ALVES LAVADO (DI)	ouvert à toutes les DG
Comité de Suivi du Projet "Mesure de la Satisfaction des Utilisateurs"	M ALVES LAVADO	M ALVES LAVADO (DI)	24, SdT
Sous-comité du CTI "stratégie de migration du traitement de texte"	M KODECK (SG)/M PUIG (DI)	M KODECK (SG)/M PUIG (DI)	ouvert à toutes les DG
Sous-comité du CTI "migration NTP"	M KODECK (SG)/M PUIG (DI)	M KODECK (SG)/M PUIG (DI)	ouvert à toutes les DG
Steering Committee Architecture Evolution	M KOENIG (DI)	M GARANT (DI)	1A,2,3,10,13/B,13/L,19,OSCE,SDT
Steering Committee Outils logistiques	-----	M TOSETTI/BLEROT	9,19
User Committee Adonis	M DEASY (DI)	M BLEROT (DI)	ouvert à toutes les DG
User Committee outils logistiques	M GASCARD (DI)	M BLEROT (DI)	ouvert à toutes les DG
User Committee Ser-Leg	M FANALS (SG)/LEONARD(DI)	M FANALS (SG)/LEONARD(DI)	ouvert à toutes les DG
GROUPES			
<u>Suite au Séminaire du 30 09 96</u>			
Groupe Schéma Directeur	BEURMS/HAIK J.(DG 8)	REMON (DI)	1A,2,3,6,8,9,14,16,20,BS,OSCE
Groupe A . Optimiser le rôle et l'utilisation de l'informatique	O'LEARY/VERVAET	SOARES E.	1,1B,10,24,IGS,SG
Groupe B. Mettre en oeuvre un plan pluriannuel en matière de systèmes d'information	DEASY/DUNNING A (DG 13L)	BERTRAND	3,8,13,SG
Groupe C Mettre en oeuvre un plan pluriannuel en matière d'infrastructure	GARCIA MORAN/BOSMAN (19)	CRELOT (DI)	1B,2,3,10,19,AAE,SPP
Groupe D . Améliorer le fonctionnement de l'organisation de l'informatique	ALVES LAVADO / MAMBOURG	SOARES E	1A,1,3,5B,6,SDT
Amélioration de la pratique du courrier électronique à la Commission	M. ROGGERI (DG 16)/ M SCHAEFER (DI)	M ROGGERI (DG 16)	1,9,15,19,SDT
EDMS/GED	M DEASY (DI)	M KOHL (DI)	3,4,8,9,13,15,16,19,20,OSCE,SCIC,SG
E-Mail	SCHAEFER (DI)	GARANT (DI)	ouvert à toutes les DG
Intranet	WEIDERT/CRUCKE	WEIDERT/CRUCKE	3,5,19,SCIC,SDT
Nouveau cadre contractuel			
Groupe A M I (appels à manifestations d'intérêt)	resp. BEGLEY (DI)		3,6,7,9,19,21,OSCE,SG
Groupe Appels d'offres pour Serveurs Windows NT	resp LAMBOT (DI)		3,10,13,19,OSCE,SDT
Groupe Appels d'offres PC	resp THONON (DI)		2,13,19,SDT
Groupe Appels d'offres de sous-traitance commune			
Etudes et développements	resp LEONARD (DI)		Les DG ne sont pas encore connues
Groupe de travail formation informatique	resp GRITSCH (DI)	M. GRITSCH (DI)	2,10,12,13/B,15,SDT,SJ
Support PC	resp. HERDIES (DI)		3,10,13/B,15,SDT
Call dispatch	resp DE BACKER (DI)		3,11
LSA/DBA	resp BECKER (DI)		3,SDT
Project management	M. PEARE (DG 06)	M GROEMER (DI)	4,6,12,18,19,21,SG
Ressources et procédures	M CABALLERO (DG 20)/ M BEURMS (DI)	M CABALLERO (DG 20) M. BEURMS (DI)	7,11,12,13/L,16,17L
Sécurité	M BREMAUD (BS)		5/L,6,8,14,16,19,21,OPOCE,OSCE
SNET	M JORTAY		ouvert à toutes les DG
Systèmes Administratifs Institutionnels	M DEASY (DI)	M LEONARD (DI)	9,19,SG

[1] la DI participe à tous les Comités et Groupes

Calendrier

27/97

concernant la coopération entre la DI et les DG / SERVICES

07.07.97

COMITES

10.09.97			Comité de Coordination pour la Standardisation
30.09.97	10H30-17H00	BRUX	Comité Technique Informatique
08.10.97			Comité de Coordination pour la Standardisation
29.10.97	10H30-17H00	LUX	Comité Technique Informatique
12.11.97			Comité de Coordination pour la Standardisation
10.12.97	10H30-17H00	BRUX	Comité Technique Informatique

GROUPES

	10.07.97	10H00-12H00	IMCO 5/21	EDMS progress meeting
	16.07.97	14H30-17H00	IMCO 5/21	Groupe B: Mettre en oeuvre un plan pluriannuel en matière de systèmes d'information
(1)	03.09.97	10H30-12H30	IMCO 5/21	Groupe D: Améliorer l'organisation actuelle de l'informatique

PRESENTATIONS / DEMONSTRATIONS / SEMINAIRES / WORKSHOPS

	07.07.97	09H30-17H00	WAG 4/4	Architecture sécurité: évolution du marché
	08.07.97	10H00-	JECL 7/1A	Support Search Tools (FULLCRUM)
	8-9.07.97	09H30-17H30	WAG C4	PowerBuilder Internet Application Development
	10.07.97	14H00-17H30	CCAB	Présentation dans le cadre du projet futur E-Mail - Microsoft exchange
	10.07.97	10H00-17H00	JECL 7/	Visual Basic 4.0 Application development
	11.07.97	10H00-17H00	WAG C4	Visual Basic 4.0 Application development
	14.07.97	14H00-17H45	CCAB	Présentation dans le cadre du projet futur E-Mail - Lotus Notes / Mail
	17-18.07.97	09H30-17H30	JECL 7/	PowerBuilder Internet Application Development
(1)	18.07.97	14H30-17H00	JECL 7/1A	Workshop simplification schéma directeur

(1) Nouvelle action

Contributions: à envoyer à F. ROSSA JMO C2/82
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