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# Bulletin Informatique

**OCTOBRE 1997**

EDITORIAL .....	3
COMMUNICATIONS .....	5
STB INFO .....	6
INFORMATIONS DU CENTRE DE CALCUL .....	12
ARTICLES	
. Information technology in the European Parliament .....	14
. Comité des utilisateurs Adonis du 19 juin 1997 .....	22
. "Bien choisir le contenu de l'information": Internet et informations statistiques	23
. Deployment of 32-bit Client-Server Applications .....	27
. Euro changeover of information systems .....	39
. Migrating to Windows NT 4.0 - Security issues and solutions .....	44
. Future E-Mail of the Commission .....	50
. API's for E-Mail applications .....	52
ORGANISATION .....	55
TABLEAUX DE BORD	
. Budget informatique .....	58
. Ressources humaines .....	59
. Projets d'infrastructure .....	61
. Formation .....	62
LISTE DES PRODUITS .....	66
COMITES / GROUPES DE TRAVAIL .....	87
CALENDRIER .....	88

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

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# *Editorial*

Dans notre Bulletin informatique de janvier 1995, je faisais allusion au triple élargissement de la famille EUROPE et au fait que nous aurions l'opportunité de travailler avec des informaticiens Finlandais, Suédois ou Autrichiens. Cela se vérifie encore aujourd'hui avec la nomination de Monsieur W. BAROSCH, de nationalité autrichienne, comme chef de l'unité "Support logistique et formation".

Sont également à noter les récentes nominations de: M. Jean-Luc SION comme assistant du directeur ainsi que de M. Philippe BERTRAND comme chef de l'unité "Coordination des ressources humaines et budgétaires". Félicitations aux différents récipiendaires

Notre Bulletin est un des moyens utilisé pour la diffusion de l'information. Il doit permettre pour le moins de nous rapprocher quelque peu au travers du partage de l'expérience professionnelle. C'est pourquoi depuis quelques éditions un exemplaire est également envoyé au responsable informatique de toutes les délégations de la commission.

Un collègue de Camberra (délégation en Australie) nous fait d'ailleurs partager son expérience du problème de la sécurité au travers de la migration vers Windows NT 4.0. Vous pourrez lire aussi: une approche sur le développement d'internet et de la diffusion de l'information en général, et des informations statistiques en particulier, ainsi qu'un article sur le développement de la nouvelle architecture informatique du Parlement européen.



# INFOTECH

from paperwork to modern technology

We started with yellow paper copies, which we sent bi-weekly to anybody working in an informatics environment at the Commission. That was in 1995, when a big part of the work for the Infotech consisted of copying it and sending it to the interested readers.

Last week, we were happy to celebrate our **100<sup>th</sup> edition**. Well, what has changed meanwhile ? Paper copies have been replaced by electronic versions. You can either receive the Infotech through email (just inform me if you would like to receive it) or you can access it through the server EUROPAplus.

The address is: <http://www.cc.cec/di/ruc/it/infotech.htm>

The maximum part of the work is now dedicated to the research work, mostly on the Internet. Everybody knows that the Internet is an endless source of information and our work consists in filtering a good deal of this information and putting it together in one single information sheet which contains a little bit for everyone. We are doing this every two weeks.

From the echoes that we get, we know that Infotech is a utility that helps you to be at least up to date with the most interesting events happening in the IT world. We would like to thank you for your interest in Infotech and will be happy to give you our service also for the next 100 editions.

Irmgard LOEPER - The Editor

## Informaticiens, soyez "verts"!

La Commission a adopté le 16 juillet 97 un plan d'actions visant à rendre plus écologique les activités de bureau. Dans ce cadre, la communauté informatique (DI et IRM) devrait:

- veiller à appliquer une méthode de "durée de vie entière" dans les procédures acquisitions, ce qui inclut notamment les consommables et la consommation d'énergie
- diffuser des informations aux utilisateurs de l'informatique en vue d'une gestion plus économe de l'énergie (ex: ne pas laisser inutilement son PC allumé)

Ces deux actions visent à mettre en oeuvre des mesures de bon sens et à sensibiliser régulièrement les utilisateurs.

Un comité directeur "Green Housekeeping" est chargé de suivre l'exécution sur le terrain du plan d'actions décidé par la Commission et de remettre un premier rapport en fin d'année.

D'autre part, dans le cadre de la politique écologique mise en place dans les services de la Commission et développée dans le livre vert, l'Administration vous invite:

**pour Luxembourg** à retourner régulièrement vos cartouches usagées vides LASER et DESKJET, dans leur emballage d'origine, au magasin des fournitures de bureau:

Monsieur Patrick BOSCHIAN  
JMO C-1 / 40 (tél: 34518)

**pour Bruxelles** à utiliser les boîtes mises à votre disposition

Ces cartouches seront retournées aux fournisseurs contre paiement. Nous avons constaté que la moitié seulement des cartouches usagées est renvoyée au magasin.

Nous vous demandons un effort supplémentaire et vous remercions pour votre collaboration.

P. GARANT (DI / RUC)

DG IX / unité Administration



## PRODUITS ORACLE INFO

### Comptage utilisateurs Oracle

D'après l'actuel contrat avec Oracle, la Commission doit faire un relevé de l'utilisation d'Oracle. Ce relevé doit se faire pendant l'année 1998 afin d'ajuster le nombre d'utilisateurs pour la quatrième année du contrat (1999). Pour cela, DI-STB, en collaboration avec les autres Institutions européennes, a mis en place une procédure de comptage en accord avec les règles établis dans le contrat.

Les DG qui désirent faire un test de procédure sont priées de contacter:

M. RUIZ DE LA TORRE (DI-STB, tél: 32141).

### Evaluation d'Oracle sur Windows NT

Oracle a été évalué sur la plate-forme Windows NT. Malgré quelques manques d'intégration avec l'environnement Windows NT, le produit a démontré sa fiabilité et a bien supporté la charge typique d'une base départementale. Un rapport d'évaluation est disponible auprès de DI-STB et dans Softline.

Pour avoir plus d'information, veuillez contacter M. RUIZ DE LA TORRE (DI-STB, tél: 32141) ou M. JOULAIN (DI-STB, tél: 33783).

### Scripts run-time pour Developer/2000

Suite à la demande des DG, DI-STB va procéder à développer en collaboration avec Oracle des scripts d'installation pour les run-times de Oracle Forms 4.5.7, Oracle Reports 2.5.5 et Oracle Graphics 2.5.7. Les scripts seront disponibles pour la fin Octobre aussi bien pour l'environnement 16 bits que pour le 32 bits.

Pour avoir plus d'information, veuillez contacter M. RUIZ DE LA TORRE (DI-STB, tél: 32141) ou M. JOULAIN (DI-STB, tél: 33783)

### Drivers ODBC pour Oracle 7.3

Situation de l'installation de ODBC 16 et 32-bit et des Drivers Oracle sur la NTP 3.5

ODBC 16-bit:

- Version 2.00.1510
- Drivers Oracle:
  - Oracle73 version 1.16.03.01.07
- Scripts:
  - odbc20ba = Installation d'Odbc
  - sn23216b = Installation SQL\*Net 2.3 16-bit + Driver Oracle "Oracle73"

ODBC 32-bit :

- Version 3.0.2822
- Drivers Oracle:
  - Microsoft ODBC Driver for Oracle version 2.00.006325
  - Oracle73 version 200.03.01
- Scripts:
  - odb3032n = installation d'Odbc et du driver Oracle "Microsoft ODBC Driver for Oracle"
  - sn23232b = installation SQL\*Net 2.3 32-bit + Driver Oracle "Oracle73"
  - sn2323p1 = installation des patches de SQL\*Net 2.3 32-bit + patches pour Driver Oracle "Oracle73"

Personne à contacter pour tout complément d'information:

Ph. FAYMONVILLE (tél: 60122)

## PRODUITS MICROSOFT INFO

### Evaluation VB5

Suite à l'introduction de la version 5 de Visual Basic, nous sommes en train de préparer un document d'évaluation. Ce document fera le point sur ses nouvelles fonctionnalités et mettra à jour des recommandations pour son utilisation à la Commission. Ce guide sera disponible fin Octobre.

Le guide de développement pour Visual Basic va être "rafraîchi" en fonction des nouveaux éléments. Le guide actuel (VB4) est disponible au secrétariat.

Deux présentations par Microsoft des nouvelles

fonctionnalités de VB5 ont été organisées à Bruxelles et à Luxembourg.

Pour plus d'information, contactez Pierre A. Damas ou José Marín à DI-STB.

### **Evaluation Access 97**

L'adoption des nouveaux produits Office et des plate-formes 32-bit nous fera passer de Access 2.0 à Access 97 sans transition. Un document d'évaluation d'Access 97, reprenant également les problèmes de migration et de nouvelles recommandations est en cours de rédaction. Il sera disponible fin Octobre. Nous avons entretemps réalisé un guide Access 95, qui est disponible au secrétariat. Bien que ce ne soit pas une version recommandée, les conseils d'utilisation qui y sont donnés sont applicables en Access 97. Ce guide sera rafraîchi ultérieurement.

Pour plus d'information, contactez:  
Pierre A. Damas ou José Marín à DI-STB

## **PRODUITS POWERSOFT INFO**

### **Point sur les versions PowerBuilder**

Les version Powerbuilder recommandées sont les suivantes:

Pour le déploiement d'applications:

- PowerBuilder 4 (seulement 16 bit, toutes Win 3.1, Win95, WinNT): Utiliser la version 4.0.05 (script pb405rtc dans Softline). Un script (pb40716a) pour la version 4.0.07 est en test à la DI et si le tests sont positifs mais il devra être utilisé seulement en cas d'anomalie.
- PowerBuilder 5 (16 bit, seulement Win 3.1): Utiliser la version PB 5.0.02 (script pb50231a dans Sofline).
- PowerBuilder 5 (32 bit, Win NT, Win 95): Utiliser la version PB 5.0.2 (script pb50232b disponible en Sofline).

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 les développement d'applications:

Nous recommandons d'utiliser les versions de développement équivalentes (PB4.0.05 et PB5.0.02). En attendant une version PB 5.0.04 finale pour décembre, DI-STB dispose d'une version provisoire PB5.0.04 qui corrige un certain nombre d'anomalies liées à ma manipulation du Rich text Editor qui peut être fournie à la demande.

Pour plus d'information:  
G. Joulain ou Pierre A. Damas

### **PowerBuilder 6.0**

Powerbuilder 6.0 est actuellement en phase de finalisation de sa version Beta. La version finale sera disponible fin d'année, la phase Beta ayant pris un mois de retard. Une version "full Unicode" sera disponible un peu plus tard pour la plate-forme NT, facilitant les développements multilingues.

Powerbuilder se situe toujours au niveau de développement d'application Client-Server. Des améliorations sont apportées à la partie 'distributed PB' (shared objects, server push), ainsi qu'à Web.PB (HTML enhancements, multiple values arguments), mais le support de modèles standards de composants (CORBA/COM), le support de moniteurs transactionnels (Jaguar CTS) et la connectivité avec les applets Java (Java Beans proxy generator) sont encore des annonces pour le futur.

Ce qui est réellement implémenté dans la version 6.0 de base est situé principalement au niveau de la productivité du développeur (Data Windows enhancements, Debugging, profiling and tracing)

Pour plus d'information contacter:  
Pierre A. Damas ou Monique Limbos

## DIVERS

### Migration des SI dans le cadre du projet NTP

Dans le cadre du projet NTP, et suite à l'adoption des plate-formes 32-bit, nous avons regroupé dans un document des orientations et des conseils pratiques pour la migration des applications 16-bit.

Ce document, publié au Bulletin Informatique, est également disponible au secrétariat.

Nous sommes à votre disposition pour préparer des réunions d'information avec les développeurs pour vous aider à préparer votre plan de migration des applications. N'hésitez pas à nous contacter.

Pour plus d'information, vous pouvez contacter Pierre A. Damas ou José Marín à DI-STB.

### Evaluation de outils de développement pour Web

Dans le cadre de la réflexion que nous menons sur les outils de développement Internet/Intranet, nous allons effectuer différentes actions:

Premièrement, nous allons définir un cadre technique général pour les applications Internet/Intranet. Ce cadre décrira les architectures des applications, les technologies que l'on pourrait utiliser pour le déploiement, et les outils existants. Pour chaque élément de ce cadre technique, nous énoncerons les problèmes rencontrés et donnerons des orientations.

Pour les domaines qui ne sont pas encore couverts par des produits dans la Commission, nous mettrons en route des évaluations.

C'est ainsi que nous commencerons une évaluation des outils intégrés horizontaux (recouvrant la création d'HTML, le scripting côté client et serveur, la création de composants, l'utilisation des bases de données), et des outils plus spécifiques, par exemple les Java IDE. Les serveurs de transaction (Jaguar CTS, MSTs, ...) et les outils de création de composants aux interfaces standard (CORBA/COM) ne seront pas oubliés.

Nous espérons être en mesure de faire une série de propositions au product management dans le premier trimestre 1998.

En attendant, pour tout projet Internet/Intranet à mettre en production au Centre de Calcul, il est conseillé de les contacter avant le démarrage, de façon à utiliser dès le début des technologies qui sont compatibles avec l'infrastructure en place. Nous nous tenons également à votre disposition pour organiser des réunions d'information avec les développeurs avant la mise en route pour le choix des outils de développement.

Lors du Workshop Intranet organisé par SSI, nous avons eu l'occasion de présenter une avant-première du cadre technique. Les slides de cette présentation peuvent vous être transmises à la demande.

Pour plus d'information, vous pouvez contacter Pierre A. Damas ou J. Marín à DI-STB.

### Objet OLE 32 bits pour Route 400

Nous avons développé en collaboration avec STD un objet OLE qui permettait de s'adresser à Route400 pour interroger le fichier d'adresses et envoyer des documents vers différents destinataires.

Une nouvelle version de cet objet est disponible, d'une part pour supporter la plate-forme 32-bit, et d'autre part pour utiliser le protocole P7 à la place du file sharing pour l'envoi des messages. L'interface de l'objet est restée compatible, et une fonction a été rajoutée pour utiliser un password lors du login sur la mailbox (SetPassword).

Pour plus d'information, vous pouvez contacter Pierre A. Damas ou Christophe Marchal

### NTP Reference Configuration 3.5 (final) now available

NTP Reference Configuration (NTP-Ref) v 3.5 is now available for distribution. This release (the sixth since January 97) comes at the beginning of the roll-out phase for many DGs and Services and therefore constitutes a "baseline" for the client configurations that will be deployed this autumn and throughout winter 97/98.

The main new features in version 3.5 are Office



97 SR1 (which is considered the first stable release of the Office97 suite), the new binary Word 6 converter and Eurolook 3.7.

NTP-Ref 3.5 is distributed in two different ways: on CD-ROM and pre-installed on the new Olivetti M2-233 PCs – the “*Base Configuration*” initiative.

The CD-ROM contains the installation scripts for the various components, together with a tool for complete unattended installation known as *NTP Setup*. This allows installation from scratch of the full configuration on workstations. Practically all aspects of the installation, including the user interface, can be customised.

Pre-installation of the new PCs is a novelty at the Commission. Instead of an installation limited to the system itself, the new PCs are delivered with a substantial subset of NTP-Ref already installed. This subset includes the main application software common throughout the Commission. The objective is to supply a workstation that can be deployed almost immediately on the user’s desk.

For further details on the contents of NTP-Ref 3.5 please download “NTP Setup v 3.5 User Guide” from the NTP page on Softline. To obtain a copy of the CD, please send an E-mail request either to G. BENALI or J. GRAZINA

### Plan des cours concernant les outils de développement d’octobre à décembre 1997

Ci-après le planning des cours pour développeurs organisés au second semestre 97 par le Forum. Afin d’éviter que les cours ne soient annulés par manque de participation, il est essentiel de s’y inscrire auprès du Forum; il en va de même pour les cours "sur demande" qui ne sont organisés que lorsqu’un nombre suffisant d’inscriptions est parvenu au Forum.

Il est à signaler qu’un certain nombre de cours Web sont planifiés ainsi qu’un séminaire du Gartner Group concernant le développement d’applications Intranet et un autre séminaire sur le formalisme UML (Unified Modeling language) pour la modélisation orientée objet.

Rappelons également que les informations actualisées sur les cours sont diffusées dans le compte rendu des réunions mensuelles avec les fournisseurs (Oracle, Powersoft et Microsoft).

#### Formation outils de développement : Généralités

Titre	Bruxelles	Luxembourg
<b>Techniques</b>		
<b>Déploiement et distribution de composants avec VB5 (M-DVB)</b>	<b>27/oct</b>	<b>3/nov</b>
Active X technologies: concepts et utilisation (2j) (M-ACT)	en discussion	en discussion
ODBC3: concepts et utilisation (?) M-ODBC)	en discussion	en discussion
Accès à des bases Oracle7 via ODBC avec VB5 et Access 97 (M-ORA) (2j)	en discussion	en discussion
<b>Concepts</b>		
<b>Orientation Objet avec UML (Unified Modeling language) (1j) (X-UML)</b>	<b>1/dec</b>	<b>12/nov</b>
MSF Solution Development Discipline (3j) (M-SDD)	à évaluer	
Designing Component Solutions (3j)	à évaluer	
<b>Internet Applications Development (S-GG)(EN)</b>	<b>21/nov</b>	<b>20/nov</b>
Techniques de base du développement Intranet (S-TBI)	à évaluer (SQL-I)	
Développement Intranet Orienté transactionnel (S-DIT)	à évaluer (SQL-I)	
Formation Corba	en préparation	
Formation Java	en préparation	

(EN) = cours en anglais

Formation outils de développement Powersoft (**PowerBuilder, PowerDesigner**)

<b>Titre</b>	<b>Bruxelles</b>	<b>Luxembourg</b>
<b>Introduction</b>		
Overview PB5 et Infomaker 5 (1) (P-PBOV)	sur demande	sur demande
<b>PowerBuilder</b>		
FastTrack to PB5 (Introduction)(4) (P-PBI)	13-16/oct	20-23/oct
Building Object-Oriented Applications with PowerBuilder (3) (P-PBOO)	10-12/nov	17-19/nov
Mastering Data Windows (2) (P-MDW)	sur demande	sur demande
Exploiting DataWindow Technology(Data Windows Advanced )(2) (P-DWA)	sur demande	sur demande
Managing Performance in PowerBuilder (1j) (P-PER)	24-oct	27-oct
Building applications using PFC (2) (P-PFC)	9-10/oct	sur demande
Application partitioning with PowerBuilder (2) (P-APAR)	sur demande	sur demande
Best practices I : Application Design and Standards (5j) (P-BP1)	non-disponible	non-disponible
Best practices II : Application development (5j) (P-BP2)	non-disponible	non-disponible
Leveraging OLE technology	20-21/nov	24-25/nov
<b>Infomaker</b>		
Reporting with Infomaker (2) (P-IMI)	13-14/nov	sur demande
<b>Web applications</b>		
Building PowerBuilder Internet Applications (3j)(P-INT)	29-31/oct	16-17/sept
<b>Outils CASE</b>		
Data Modeling with PowerDesigner (3j)(P-PDE)	26-28/nov	29-31/oct
<b>Workshops</b>		
Development Guide PB5 (doc. DI)(1j) (P-DGPB) (EN)	3-oct	6-oct
Using Oracle with PowerBuilder (doc. DI) (2) (P-ORPB)	en préparation	en préparation

Formation outils de développement Microsoft (**Visual Basic 5, Access 97, ...**)

<b>Title</b>	<b>Brussels</b>	<b>Luxemb.</b>
<b>Visual Basic</b>		
Overview (1j) (M-VBO)	sur demande	sur demande
Visual Basic Fundamentals (Introduction) (5) (M-VBI)	20-24/oct	10-14/nov
Mastering BS 5.0 (Avancé) (5) (M-VBA)	17-21/nov	1-5/dec
Upgrading VB 4 to VB 5	en discussion	en discussion
<b>Access 97</b>		
<b>not available for the moment</b>		
Overview (1j) (M-ACCO)		
Introduction (3j) (M-ACCI)		
Avancé (3j) (M-ACCA)		
<b>Workshops</b>		
Access: Administration avancée (M-ACCA) (1j)	à revoir pour Access 97	
<b>Office 97</b>		
Mastering Office 97 Development (VBA) M-MOFF97)	à fixer	à fixer
<b>WINDOWS NT Developers</b>		
Concepts Windows NT pour développeurs	en discussion	

(EN) = cours en anglais

Formation outils de développement Oracle (**Database Server, Dev/2000, ..**)

<b>Title</b>	<b>Brussels</b>	<b>Luxemb.</b>
<b>Introduction</b>		
Oracle8: New Features Seminar (SEM) (1d) (O-OVOR8)	3/oct	13/oct
<b>SQL and PL/SQL</b>		
Oracle SQL and SQL*Plus(4d) (O-SQLP)	15-18/sept	on request
PL/SQL and procedural option (3d) (O-PLPO)	24-26/sept	on request
Achieving PL/SQL Excellence: Advanced PL/SQL Techniques and Packages (2d) (O-PLA)	non disponible	non disponible
<b>Development tools</b>		
Introduction Forms 4.5 (4d) (O-F45I)	sur demande	sur demande
Forms 4.5 Avancé (3d) (O-F45II)	sur demande	sur demande
Reports 2.5 (3d) (O-REP25I)	sur demande	sur demande
Oracle Graphics (2d) (O-GR25)	sur demande	sur demande
<b>Case tools</b>		
Business Modelling and Database Design with Designer/2000 (5d) (O-BMDD)	1-5/dec	sur demande
<b>Database Administration</b>		
Oracle 7 DBA (5d) (O-DBAI)	24-28/nov	sur demande
Oracle DBA and SQL Tuning for applications developers (3d) (O-DBSQ)	sur demande	sur demande
Oracle 7.3 Backup and Recovery (3d) (O-BARE)	sur demande	sur demande
Oracle 7.3 Performance & Tuning (3d) (O-PETU)	15-17/dec	sur demande
Administration Oracle 7 pour Unix (1d) (O-SAU7)	sur demande	sur demande
Oracle 7 System Administration in NT environment (2d) (O-SANT)	6-7/oct	13-14/oct
DBA Tips and hints (O-DBATH) (1d)	sur demande	sur demande
Oracle Enterprise Manager (2d) (O-OEM)	27-28/oct	20-21/nov
Oracle 7 Parallel Query (1d) (O-PQO)	sur demande	sur demande
Oracle 7 Parallel Server Administration (2d) (O-PSO)	sur demande	sur demande
Oracle Networking (Oracle*Names, SQ*Net...) (O-ONET) (2d)	sur demande	sur demande
<b>WWW and Web Application Server</b>		
Developer/2000: Deploy Web applications (1d)(O-WEBFORMS)	17/déc	26/nov
Designer/2000: Generate Oracle Web Server Application (2d) (O-DES2WEB)	18-19/déc	27-28/nov
Oracle Web Application Server Administration(2d) (O-WEBADM)	17-18/nov	3-4/nov)
Oracle Web Application Server: Develop Web Based Applications with PL/SQL(2d) (O-WEBPL)	19-20/nov	5-6/nov

(EN) = cours en anglais



1. PLATES-FORMES

	Système d'exploit.	Disponibilité ON-LINE %		Charge (TINS)		
		Août 97	2° trim. 97	Août 97	Sept. 96 à Août 97	Moyenne mensuelle
AMDAHL	MVS	100,00	100,00	109,47	1.876,44	156,37
	VM	100,00	100,00	40,34	582,00	48,50
	PRODCRAY	100,00	-	287,63	2.667,91	333,49
BULL	GCOS8	99,79	99,28	8,02	89,86	7,49
	DPX20	100,00	100,00	7,13	130,26	10,85
DIGITAL	SINCOM A	-	-	18,52	93,97	11,75
	SINCOM D	-	-	38,29	324,19	40,52
	SINCOM T	-	-	24,01	307,54	38,44
ICL	OSLUX1	-	-	44,40	829,63	75,42
	OSLUX2	-	-	14,66	245,79	22,34
SNI	BS2000	98,43	100,00	15,31	249,47	20,79
	NILE1	99,75	97,92	101,47	1.141,60	103,78
	NILE2	100,00	99,03	105,38	694,97	63,18
<b>TOTAL</b>		<b>99,75</b>	<b>99,46</b>	<b>814,63</b>	<b>9.233,63</b>	<b>769,47</b>

2. SYSTEMES D'INFORMATION

Systèmes d'information	Systèmes	Consom. août-97	Sept. 96 à août 97	Moyenne mensuelle(*)	2° trim. 96	2° trim. 97
SINCOM	PRODCRAY	97,51	199,21	24,90	*	88,26
NAP	NILE 2	96,69	651,30	59,21	*	206,43
COMEXT	PRODCRAY	96,60	1 749,99	218,75	*	733,37
SINCOM	MVS	81,51	875,63	72,97	166,40	222,68
DOCSEVER	NILE 1	57,06	638,64	58,06	*	227,31
NEWCRON	PRODCRAY	48,41	353,25	44,16	*	172,28
EURAMIS	NILE 1	39,78	467,80	42,53	*	115,21
WINSUIVI	NOSLUX1	38,72	798,94	72,63	*	223,91
SINCOM D	SINCOM D	38,29	324,19	40,52	*	161,62
TEXTILES	PRODCRAY	31,50	303,26	37,91	*	92,42
SINCOM T	SINCOM T	24,01	307,54	38,44	*	149,18
SINCOM A	SINCOM A	18,52	93,97	11,75	*	23,57
SYSLING	MVS	17,30	211,83	17,65	56,28	49,04
RAPID	OSLUX2	14,66	245,79	22,34	*	78,98
IRENE	VM	13,79	153,40	12,78	28,07	42,56
CRON.SEC1	PRODCRAY	13,54	61,39	7,67	*	0,00
SICMOB	NILE 2	8,61	28,70	2,61	*	11,31
CRON.SEC2	VM	6,52	17,89	1,49	6,64	3,35
CELEX	GCOS8	6,31	69,44	5,79	14,50	17,72
MULTILIS	DPX20	5,94	113,84	9,49	*	39,47
Autres applications		59,37	1.567,61	130,63	262,87	394,08
<b>Total</b>		<b>814,63</b>	<b>9.233,63</b>	<b>769,47</b>	<b>534,75</b>	<b>3.052,76</b>

\* Disponibilité des chiffres depuis :

oct-96 pour les plates-formes NILE1, NILE2, NOSLUX1 et OSLUX2

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



3. CHARGE (EN TINS) PAR DG TITULAIRES DES SYSTEMES D'INFORMATION

DG Titulaires	Consom. août-97	Sept. 96 à août-97	Moy. 12 dern. mois	2° trim. 96	2° trim. 97
DG XIX	259,93	1.813,52	151,13	166,56	648,31
EUROSTAT	185,43	3.189,45	265,79	155,70	1.171,41
SDT	158,57	2.165,16	180,43	58,68	626,11
DG XVI	101,85	745,46	62,12	18,34	228,21
DG III	31,50	303,30	25,27	1,24	92,42
DG IX	20,64	213,75	17,81	45,00	52,04
SG	15,55	176,18	14,68	33,59	47,51
SPP	14,70	257,12	21,43	0,11	79,19
DG X	7,54	135,11	11,26	0,28	43,47
OPOCE	6,58	71,31	5,94	14,50	17,88
DI	6,52	42,60	3,55	9,63	8,57
DG VII	2,74	65,14	5,43	18,63	23,04
DG XVII	1,00	15,26	1,27	2,43	6,65
DG VI	0,83	11,01	0,92	2,21	1,97
DG XVIII	0,58	20,25	1,69	5,08	4,05
DG IV	0,58	6,62	0,55	1,64	1,38
CDC	0,10	1,08	0,09	0,19	0,25
Autres DG	0,00	1,32	0,11	0,94	0,28
<b>Total</b>	<b>814,63</b>	<b>9.233,63</b>	<b>769,47</b>	<b>534,75</b>	<b>3.052,76</b>

# Information Technology in the European Parliament

The Members of the European Parliament have an intense workload, are highly mobile geographically and need strong administrative support to enable them to fulfill their objectives. A key element in meeting these requirements is the provision of facilities for communicating and accessing information in electronic form. At the same time there is a growing need on the part of the general public to have easier access to information arising from the European Parliament's work. In the light of this situation and the expectation that the new millennium will bring even more challenges, the following report was drawn up by Mr Bertel HAARDER, Vice-President of the European Parliament, to provide guidelines for the use of information technology in the institution in the years to come. The Bureau of the European Parliament approved the report in June 1997.

Harald RØMER  
Secretary-General Adjoint  
and Director General, Directorate General of the Presidency  
European Parliament

## 1. Introduction

The main objective for the development of data processing within the European Parliament was until recently to improve and rationalise the internal production processes and the administrative procedures. This was highly necessary and it has helped Parliament to overcome many of the practical difficulties related to the three places of work. But it did also mean that there was no need to integrate right from the beginning Members into the internal system. At that time, Members also wanted to purchase their own equipment on an individual basis (not even the Political groups' secretariats were integrated in the beginning, but this was changed in 1988/89).

The whole production of documents has been computerised and has benefitted enormously from cutting down on transmission delays and from a centralised translation system coupled

with a decentralised printing and distribution system. At the same time, only a small part of the effort has been directed towards communication with Members and the outside world (OVIDE).

For essential production purposes, an internal repository (EPADES) has been built to serve the indispensable exchange and retrieval of documents (provided their address is known). It does not, however, allow for searching of documents.

To a certain degree, this development reflects the general development of computer technology over the years. The last 2-3 years have seen a real explosion in electronic communication facilities through the Internet and related technologies. This development makes it indispensable to reorientate and adapt the EP's strategy for information technology with more emphasis being put on communication.

It is now necessary that Members become integrated into the internal information network and gain direct access to the large raft of documents available, also from their offices in the Member States, and it is necessary as well to open up the EP's information system, whenever public documents are being handled, to the public in general.

One important step in this direction has already been taken by the Bureau's decision of 17 June 1996 to equip Members in their offices in Brussels and in Strasbourg with computer equipment linked with the internal network. This decision will be implemented as soon as the new buildings in Brussels and in Strasbourg become available.

Another important step in that direction has been the EP-pilot project on Internet, EUROPARL, which opened in November 1996. This has given valuable experience and will be generalised from this autumn.

In view of these developments it has also become necessary to review the concept of the EPiCENTRE project in order to concentrate more on documentary services and value added information; this is outlined in a separate document on a Parliamentary Documentation Centre. Access to the actual documents in the current workflow within Parliament will now be handled through the internal network (Intranet).

## 2. New structure

In order to cover the needs of production as well as communication -without sacrificing the security of the internal systems -the EP's information system is to be developed on the basis of an architecture which operates a clear separation between the production system and the internal communication network (Intranet) as well as a second separation between the internal and the external communication (Internet).

This means that the production databases will have to be complemented by a single database for information dissemination: the latter is to contain the full text of parliamentary documents and other documents of interest, links between related documents, as well as event-related information (such as the status of parliamentary procedures), and links between these and the relevant documents. This dissemination database is to constitute a coherent whole, appearing technically transparent to the user, who does not have to know from where he or she has to retrieve the desired information.

This single database is also to be fitted with a single text search engine and a single access control mechanism for all documents. These features are currently being selected and implemented, with a view to initial availability in September 1997 (please see § 4.1).

An EP-internal (Intranet) copy of this dissemination database is intended to be accessible, via the EP's internal network, by the Members, by their assistants, by the staff of the Institution and, as soon as possible, from the Members' offices in the Member States.

Another, public version is to be accessible by the outside world via the Internet. It selectively replicates the internal version, filtering out the information not yet to be released in the public domain. For security reasons, it is implemented outside the EP's internal network, which is separated from the Internet by means of special access control points. A prototype of this external copy of the dissemination database has also come into operation.

## 3. Provision of informatic equipment to the Members

This is the first, basic building block of the IT architecture which is to enable the Members to communicate with each other and with services both within the Institution and the outside world.

This equipment will consist of a powerful, personal computer along with basic software

tools, a printer, and a connection to the EP's network, the whole being standardised, compatible with, and integrated in, the Parliament's IT infrastructure. This infrastructure (including the local area network, and the IT products selected) extends and applies to the Secretariats of the Political groups and to the external information offices.

The Members' IT equipment is to be installed in their offices in Brussels in 1997 and in Strasbourg in 1998. The systematic policy of polyvalent cabling applied in the new EP's buildings makes it technically possible to install in the future more than one workstation per Member, if e.g. the needs of more assistants were to be catered for.

The Members' PCs will run on Windows NT Workstation 4.0, which is currently the most advanced among the commercially available versions of this de facto standard operating system. Given that it is currently still used only on an exceptional basis in the Secretariat General, some integration aspects will have to be monitored, pending an overall upgrading.

The wordprocessing software will be Corel WordPerfect 7.0. WordPerfect has been chosen because it is the standard wordprocessing package in the Secretariat General and the political groups and will ensure the highest level of quality in the exchanges of texts between the Members, the officials, and the EP's document repositories. It will also achieve the best level of integration with the electronic mail software in use in the Institution. Another choice, e.g. Word as certain Members are used to, would only create problems for the retrieval of documents which are all established in WordPerfect. The opportunity of migrating at a later stage to Word for the whole Institution (Members, Secretariat, Groups) in conjunction with the other Institutions, is however under consideration.

Members' equipment will include a CD-ROM reader, a web browser, and a multilingual set-up. Particular attention is to be given to the mutual integration of these standard, basic tools, which

are to be accessible via userfriendly menus.

[Details on this equipment and on the user support and the training programme which will be implemented to ensure an effective use of the provided facilities, are the subject of a complementary document.]

#### **4. Services to be based on, and offered by, the EP information system architecture**

##### **4.1. Electronic access to parliamentary documents and to the status of parliamentary procedures**

The Members will be able to access, from their individual workstations, an increasingly wide variety of parliamentary documents as they become stored in the single logical database for dissemination.

Currently more than 130 different (not counting all the various stages of finalisation) types of documents of potential interest have been identified -both of internal and external origin. The EP documents intended to be made gradually available electronically in that way include reports, draft reports, working documents, amendments, A and B session documents, minutes, rules of procedure, both in their original language and in their translated versions upon their release by the translation services; on-line access to publications from the Research Programme and STOA should be similarly possible in the future, as these are also considered as candidate documents for electronic dissemination.

The initial emphasis should be on documents pertaining to ongoing or recent work, but in time historical documents should be loaded in the dissemination database as well.

[A list has been tentatively established, which] shows the types of documents which should be available right from the start upon the installation of the Members' equipment, as well as those of which their forthcoming electronic provision to the Members is planned in the near



future. Finally, for some documents, further investigations must be carried out in order to define precisely not so much the technical but above all the functional and organisational measures which will have to be taken in the near-to-medium term so as to ensure their electronic availability in a similar fashion.

Services of the Parliamentary Documentation Centre will equally be directly accessible via the Intranet.

The EUROPARL system interface on the Intranet and on the Internet will enable the Members to select and access documents in the dissemination base in a variety of ways, with the aid of a search engine, using the method they feel best suited to their search approach and to the document type:

- either by using one of the indexes available, based either on the keywords defining the subjects of interest, or on the words of the text itself, or on associated data identifying the documents (such as number, draftsman's name, title, etc);
- or by 'navigating' from one document to any of the related ones, with a simple click of the mouse; this should be particularly productive when examining a meeting agenda (notably: plenary, committees, delegations) as it enables the immediate consultation of relevant documents supporting the various points (e.g. Commission proposals, Council positions, EP reports, and in turn, from the latter, the proposed amendments).  
The same applies to listings on current and forthcoming work in the committees, and on the status of Parliament positions in interinstitutional procedures.

The Members will be able, through a simple and uniform downloading procedure, to select the documents that they want to have printed immediately on their workstation's printer, which will allow savings in duplication and distribution time and cost.

At a later stage, whole electronic dossiers for

meetings will be made gradually available; these dossiers may contain special documents which cannot be treated automatically and with which a link will have to be established in an ad-hoc manner by the concerned organ's secretariat.

The objective is to create a real working environment for Members making it possible to table amendments, questions, etc., through the internal system.

It is also foreseen to implement more personalised dissemination services such as individualised provision of information (in line with the emerging 'push' approach to information dissemination), whereby Members would systematically receive -or, at least, be notified of the availability of -electronic copies of documents relevant to their particular domains of work and interest.

#### **4.2. Access to Internet**

The Members will have unrestricted access to the Internet World Wide Web from the workstation in their EP offices. The cost of these calls to the Internet access point will be borne by the Institution. However, the possible use of commercial (chargeable) services will be paid by the Members.

As users of the EP's internal electronic mail system, which features an automatic gateway to the Internet E-Mail, the Members will also be able to send and receive messages and documents over the Internet.

It is foreseen that the local area network and inter-site network will have to be subject in 1998-2000 to significant technological and architectural modifications, as well as to capacity upgradings, as a direct result of the connection of the Members' workstations and the two-way traffic with the Internet.

#### **4.3. Provision of information on the Internet**

To the extent that documents used for an open committee meeting or the plenary should be available to the general public on the Internet,

they should be stored on the external copy of the dissemination system (Internet's EUROPARL).

Eventually, each Member should moreover have the possibility to have on this system his/her own home page, to be organised and financed by the Member. The home page (icon) should be shown alongside reports/opinions by the Member to facilitate messages, suggestions and comments being sent electronically. Political groups should play a particularly important role in this area of support for Members.

A common set of rules and guidelines concerning the content, the presentation and the updating provisions of all these pages, both the 'institutional' and the 'private' ones, should be followed.

#### 4.4. Access to external databases

Via their access to the Internet, the Members will be able to consult any external server fitted with an Internet interface, provided that this server is free from access restrictions or that the Members have the corresponding access right (e.g., password to access a server providing a chargeable service).

Among others, the Members will have access to the European Commission's RAPID press releases and EUROPA web server, as well as the Office for Official Publications' CELEX documentary database and EUDOR online document ordering (chargeable) facility. Searches in free on-line libraries and newspaper databases present on the Internet will naturally be possible as well.

Furthermore, the Parliamentary Documentation Centre (originally, EPiCENTRE) will cater for more sophisticated information retrieval needs, as well as for providing research assistance to the users. As such, it will complement the facilities available to the Members as autonomous users of their workstation. In its refocused definition, this modern Parliamentary Documentation Centre, located in the EP's premises, will offer central services such as:

- assisted search for information, featuring among others a helpdesk with computer telephone interface;
- CD-ROM server;
- access to several commercial databases and similar chargeable servers of interest, via DG IV staff;
- generalised search interface to multiple databases, allowing collective searches by global queries;
- additional, specialised search interface on the EP's dissemination base, for powerful and/or complex searches;
- system for the creation, maintenance and on-line retrieval of electronic dossiers on subjects of current interest, drawing on a wide variety of sources (including paper publications).

#### 4.5. Electronic access to news agencies and to newspaper cuttings

Many Members would be interested in an electronic access to Agence EUROPE and to major national news agencies (Reuters, AFP, EFE, ANSA, etc). More and more of these news agencies are implementing an Internet interface, and should therefore be consultable by the Members (at a charge).

On the other hand, the Directorate General for Information and Public Relations already has contracts with six major national news agencies, and the Directorate General for Research, with Agence EUROPE. These contracts allow a limited electronic internal dissemination. Generalising this dissemination to the Members could be envisaged: it would of course require a revision of the terms and of the cost of these contracts.

Currently, custom-made news dossiers of the major European newspapers are distributed on paper. It should be envisaged to send them electronically twice a day. A project is currently planned in the European Commission to deliver an operational system for the electronic delivery of press cuttings by the end of 1999. This project should be monitored, as it could provide

-at a reduced cost -a solution implementable in the EP.

#### 4.6. Teleworking

As already noted in the Pimenta report, Members make up a highly mobile community and teleworking is a highly appropriate tool for much of their work, notably when working from their home or national base. As soon as possible, Members will be able to access parliamentary documents, available on the Intranet, also from outside the Parliament's premises via the Internet to the Parliament's external dissemination database, subject to the implementation of the appropriate security mechanisms.

Provided they have at their disposal the appropriate equipment, the Members will have, from virtually everywhere, access via Internet to the external version of EUROPARL and the dissemination database.

The documents available in the EP's (internal) Intranet's EUROPARL but not or not yet released to the (external) Internet's EUROPARL will nevertheless be transferrable anywhere via Internet Mail.

The expenditures involved, to be borne by the Members, include the cost of the necessary data processing and telecommunication equipment (workstation in their home or their national base office, or possibly portable micro-computer), as well as the cost of the local calls to the nearest *Internet* access point (while communications from within their offices in Brussels and Strasbourg are at Parliament's expense).

When selecting their remote equipment, especially their software, there is of course every advantage for the Members to follow closely the EP's internal data processing strategy and standards set for the benefit of all the users within the Institution.

#### 4.7. Videoconferencing

Another application of IT worth mentioning as

of interest to the Members would be the use of facilities for videoconferencing: this should make it possible to have dialogues in Committees with the Presidency; in the same way, national Parliaments should be urged to provide for facilities to have videoconferences with Commissioners, Members of the European Parliament, etc.

A desk-to-desk videoconferencing pilot project could be envisaged after 1998, for possible subsequent deployment of this technology, which does however make very high demands on network capacity.

#### 4.8. Links with national Parliaments

Some contacts have been established between the EP and national Parliaments on questions relating to IT. These contacts should increase in order to assure cooperation with them with the view of possibly extending cooperation between Members/officials of national Parliaments and those of the European Parliament.

The possibility of granting Members of the European Parliament user rights to their respective national Parliament's information system should be examined in cooperation with them, to the extent that the MEPs would need access to more information than that made available on the national Parliaments' web servers.

### 5. Related issues

Beyond the many technical, practical and logistic questions which need to be addressed when implementing the EP's information system strategy, some connected -yet not necessarily directly IT-related -issues will have to be monitored and dealt with as well.

#### 5.1. Interinstitutional compatibility

It is crucial that the necessary degree of compatibility be achieved and maintained between the IT choices made in the different Institutions of the European Union, so as to

ensure fast, efficient, reliable and cost-effective transfers of electronic information between these natural partners.

In that respect, it is noted that, within the framework of the Interinstitutional Committee for Data Processing, the Institutions have agreed on:

- a single format for the exchange of documents of predefined structure in revisable format (SGML)
- a single format for the exchange of documents in non-revisable format (PDF).

### 5.2. Future enlargements

The EP's information system should be designed to meet the demands of future enlargements of the Union, to deal with 25 Member States and possibly 17 or more official languages.

The main technical challenge in that respect is the latter aspect (multilingualism). The orientation of the EP's IT towards the generalisation of the UNICODE character set (multi-byte coding scheme) should put it in a good position to accommodate additional languages.

### 5.3. Coverage of Members' expenditures

The European Parliament will bear the costs related to:

- the purchase, the installation, the maintenance and the support of the IT equipment in the Members' offices in the EP's premises in Brussels and in Strasbourg;
- the communications between the Member's workstation (in Brussels and Strasbourg) and the Internet access points (local calls);
- the consultation of commercial databases and the use of similar chargeable services accessed from the Parliamentary Documentation Centre.

It is estimated that these costs can be met within the 1997/1998 budget limits.

Other expenses might possibly be incurred by the Members in their use of IT, for example:

- acquisition of a portable PC, and/or an extra workstation in the EP office, at home or in the national base office, as well as the corresponding telecommunications equipment;
- browsing of chargeable databases and services (from outside the Parliamentary Documentation Centre), including access to news agencies;
- communications via the Internet from outside the EP's premises, e.g. from the Members' constituency or home, whereby calling the nearest access point will incur telephone charges.

These expenditures must be paid by the Member through the general expense allowance, which includes the earlier communication allowance. A decision to charge some of these expenses to the Parliament would make it necessary to reinforce the appropriate budget lines.

## 6. Conclusions

The European Parliament's IT strategy should keep its objective of building an information system architecture which constitutes a firm yet flexible foundation, on which facilities will be gradually made available so as to satisfy the Members' and the outside users' evolving needs for information.

Substantial resources will undoubtedly be required to carry on successfully with the implementation of this strategy. Their availability will determine the degree and the speed of implementation of the intended services.

The required resources are of course not only of a financial but also of a human nature. They will be necessary not only to build the system but above all to operate continuously and adapt effectively afterwards the facilities and infrastructures offering evolving services (e.g. to ensure a continuously reliable formatting and loading of the documents into the dissemination

database). In particular, continuous system and telecommunication operations (possibly around the clock, notably in case of special events) are demanding on human resources, and difficult to man with statutory staff.

The smooth running of these facilities will however become all the more important as the EP's information system becomes a critical component in the day-to-day life of the Institution.

Time itself has also to be recognised as a critical constraint, as solutions must be sufficiently investigated and tested to reach a degree of reliability conforming to the criticality of the information system for the Members.

Last but not least, the speed of implementation of this IT strategy will also be determined by the need to accompany and to support it with measures affecting working practices, information circuits, and possibly even organisational structures within the Institution.

# Comité des utilisateurs Adonis du 19 juin 1997

Adonis est le système de gestion et de suivi des documents de la Commission. Le comité utilisateurs Adonis réunit 2 à 3 fois par an les représentants des utilisateurs Adonis et les équipes de maintenance et de support de la DI. Il y a 47 sites en production ou en démarrage. Les organisations représentées se composaient d'un cabinet, de 21 DG ou services, de la Cour des comptes et du Comité des régions.

La journée a été introduite par M. Deasy qui a rappelé l'importance du développement d'Adonis pour la Commission européenne et son utilisation par les autres institutions et notamment celles qui l'utilisent déjà: la Cour des comptes et le Comité des régions.

La situation opérationnelle d'Adonis à la Commission et dans les autres institutions européennes a été ensuite présentée.

La nouvelle release technique, Adonis V.3.1.h a été présentée. Elle porte sur la correction de quelques erreurs.

L'intégration à Adonis 3.1 des fonctions de lien avec le document lui-même et de visualisation des documents a été présentée. Ce nouveau développement se concrétise au travers de la version 4i.0 - Adonis Image. Les caractéristiques suivantes sont prévues pour cette première version:

- L'enregistrement par scanning pourra se faire document par document ou par lot. Des fichiers Word (.DOC), Excel (.XLS) ou autres pourront être attachés à la fiche document,

- La visualisation et l'impression des documents pourra se faire à partir de la fiche document elle-même ou à partir d'une liste de documents recherchés.

Il a été signalé que des coûts matériels seront à charge des DG au niveau logiciel et matériel en dehors d'Adonis qui reste gratuit.

Les sites pilotes vont tester Adonis V4i.0 au second semestre 1997. Cette version pourra être mise en production au 1er semestre 1998.

Le comité utilisateurs a également parlé des évolutions futures: Adonis Version 5. Une nouvelle version d'Adonis va intégrer les nouvelles demandes des utilisateurs. A ces demandes pourraient être ajoutées de nouvelles fonctions de gestion électronique de documents et l'intégration avec les systèmes d'information et l'environnement de la Commission.

Le comité s'est terminé en rappelant l'importance accordée au développement inter institutionnel d'Adonis en remerciant les institutions présentes pour la première fois.

L'après-midi a été consacrée à un workshop qui a permis un échange fructueux des expériences et la réponse à des questions spécifiques.

L. CREEMERS  
DI/SSI

# “Bien choisir le contenu de l’information”: Internet et informations statistiques

*Une des préoccupations majeures de Fernando de Esteban en tant que Directeur d'Eurostat consistait à rendre les informations statistiques suffisamment compréhensibles pour qu'elles puissent être acceptées comme outils de travail: "Les utilisateurs doivent recevoir des informations et non pas un cimetière de chiffres."*

*En février 1997, il a été nommé directeur de la Direction Informatique de la Commission européenne. Résultat: la mission reste la même, malgré un champ de travail élargi et une perspective différente.*

*Steffen Schneider de Sigma a voulu savoir, comment la Direction Informatique réagit aux nouveaux développements technologiques et quelle place occupe Internet, le "réseau des réseaux" dans la diffusion des informations, en général, et des informations statistiques, en particulier.*

## **Quelle rôle joue la Direction Informatique dans la Commission européenne?**

C'est une direction très dynamique, un peu trop peut-être. Les autres directions et services nous imposent ce rythme. C'est extrêmement varié, en plus.

Au sein de la Commission, plus de 1000 personnes gravitent autour de l'informatique. C'est passionnant, et les collaborateurs sont de très bons professionnels. Le problème est que la technologie évolue à une telle vitesse que, si on ne se trouve pas dans un état d'alerte permanent, on est tout de suite dépassé par les événements. C'est très intéressant, parce que l'informatique représente l'avenir. Toute la partie de l'information assistée par ordinateur et les autoroutes de l'information s'appuient sur l'informatique. C'est passionnant, mais astreignant en même temps.

## **Comment voyez-vous l'avenir de la Direction Informatique?**

Nous devons continuer à être un service, et ceci de plus en plus, mais être également une référence. Une référence non seulement pour la Commission, mais également pour l'extérieur. Je voudrais organiser un service, transmettant l'expérience d'une informatique appliquée à une grande administration avec une multitude de 20 000 usagers, confrontés à des problèmes multilinguistes. Nous sommes probablement les seuls au monde à disposer d'une telle expérience, en principe transférable à d'autres, avec toutes les limitations et toute la prudence nécessaires.

J'entends proposer, dans un avenir proche, aux Directions générales, chargées de définir la politique de l'information et des télécommunications, d'utiliser les services de la Direction Informatique comme une expérience pratique transmissible.

## **Aujourd'hui, on ne peut plus se priver d'Internet. Le "réseau des réseaux": va-t-il se substituer aux autres outils d'information ou est-ce qu'il ne constitue qu'un outil complémentaire à côté des autres ?**

Il ne faut pas sacraliser Internet. Internet est un réseau qui offre une convivialité et une facilité de communication formidables. Le Web, malgré ses avantages, ne va pas résoudre tous les problèmes. C'est un instrument ou, si on peut me permettre la comparaison, un téléphone. La conversation, c'est à nous de l'ajouter. L'important, c'est le contenu. A l'heure actuelle, sous Internet, on trouve des multitudes d'informations, les unes sont valables, les autres plutôt polluantes, si ce n'est mauvaises. Un jour, il faudra trouver des solutions de prénettoyage de l'information.

Par ailleurs, l'on ne peut pas tout mettre sur Internet, il faut procéder à un choix judicieux. Il faut que l'information soit précise et rapide. L'utilisateur Internet ne reste pas devant l'écran pendant des heures entières. L'information doit renvoyer vers des publications sur d'autres supports, à moins qu'une brève information ne satisfasse directement l'utilisateur. Dans ce cas-là, il faut qu'elle soit très brève et surtout actualisée.

### **Est-ce valable pour la statistique aussi?**

Pour la statistique, il peut y avoir une petite différence. C'est-à-dire que les séries historiques sont nécessaires, surtout pour les études dans le cadre desquelles on applique des modèles économétriques. L'élément "fraîcheur" n'est pas aussi importante que l'élément "série". Cependant, quand on parle de statistiques, on ne parle pas seulement du passé, on parle surtout du présent et de l'avenir.

Dans le présent, on a besoin de statistiques fraîches, le plus rapidement possible. Donc, Internet peut être une très bonne voie, au moins pour ce qui est des statistiques conjoncturelles. Le système est également un excellent moyen de diffusion de nos statistiques prévisionnelles. Pour tous ces concepts, Internet constitue une voie simple et un accès très aisé, permettant une diffusion large à travers le monde entier. Le problème pour Eurostat, en particulier, mais également pour l'ensemble des instituts statistiques est de mettre à jour régulièrement les informations, de distinguer entre les informations gratuites et payantes. C'est une définition qui convient d'être faite à l'intérieur de chaque institut.

Et puis n'oubliez pas qu'il existe d'autres moyens pour la transmission des données qui sont aussi performants et qu'Eurostat et la Commission sont en train de mettre sur pied. Ida (Interchange of data between administrations: un programme de la DGIII, dont l'objectif est de faciliter l'échange efficace des data électroniques entre les administrations des pays membres de l'UE), par exemple, est plus spécifique, mais constitue néanmoins un réseau parallèle.

### **Quelle place occupe Internet dans les activités de la Commission européenne?**

Nous avons la chance de disposer d'ores et déjà d'un serveur. Le serveur EUROPA fonctionne très bien. Cette offre est de plus en plus utilisée, avec un taux de croissance



étonnant. L'information à l'intérieur de la Commission est développée sur *EUROPAplus*. C'est une source d'information privilégiée, qui doit être actualisée en permanence, l'utilisation doit être facile.

En règle général, la mise à jour est effectuée. Beaucoup de services font l'effort formidable pour s'introduire dans le réseau, mais manquent d'actualiser l'information. Ces commentaires sont valables autant pour EUROPA que pour *EUROPAplus*. Les services doivent manifester un intérêt permanent pour offrir l'information, comme on dit à Eurostat, fraîche. Si on réussit ce pari, Internet est pour la Commission une voie idéale pour disséminer l'information aux usagers, qu'ils soient européens ou non.

### **Quels sont les avantages comparatifs de l'Europe, de l'Union européenne, peut-être de la Commission?**

Il y a quelques semaines, j'ai eu l'occasion de recevoir le vice-président de Microsoft. Pour situer l'Europe dans le contexte mondial, je lui ai d'abord montré les marchés du point de vue de la population. C'est un marché extrêmement important, plus important que celui des Etats-Unis ou du Japon. Et je lui ai montré les dépenses que les administrations nationales de nos Etats membres et la Commission réalisent en matière informatique.

Dans ces conditions, nous ne devons pas avoir peur pour l'avenir. L'Europe se trouve en bonne position. Du point de vue aussi bien privé que public, la Communauté peut faire face à un marché important de l'information à travers l'informatique.

Les statistiques relatives à la consommation de produits informatiques, comparant les différents pays d'Europe, montrent que la fourchette entre ceux qui consomment le moins et ceux qui consomment le plus à l'intérieur des 15 varie du simple au triple. Par comparaison au pays qui est le plus grand consommateur, la Suisse, cette fourchette s'élargit du simple au quadruple ou au quintuple.

Par contre, si nous considérons la moyenne des dépenses par tête en Europe et aux Etats-Unis, l'Europe est en retard, mais nous nous rapprochons sérieusement des Etats-Unis. Le marché informatique en Europe a une potentialité très importante, mais il faut continuer à faire des efforts.

### **Ceci nous amènerait à une discussion sur la démocratisation d'Internet?**

La démocratisation d'Internet, des services informatiques, se fera au fur et à mesure que les ménages ou les individus seront mieux dotés des moyens électroniques, informatiques nécessaires. L'évolution est très rapide. Aujourd'hui, en Europe, l'utilisateur le plus important d'Internet est la Finlande. Mais dans les pays du sud l'utilisation d'Internet augmente avec des taux très encourageants. En classant les journaux sur Internet par nationalité, on se rend compte que les pays du sud sont très bien lotis. La tendance sera à un alignement. Dans les trois à quatre prochaines années, on ira vers une évolution très semblable à celle vécue pour la télévision ou la voiture.

Dans certains pays, on disposait d'une voiture pour deux habitants, tandis que pour

d'autres il y avait une voiture pour dix habitants. Petit à petit ces différences se sont rétrécies. En matière informatique, la même évolution se produira, mais avec un bémol en plus. C'est que la productivité dérivée de l'utilisation de l'informatique est telle qu'elle permettra aux pays moins développés de rattraper rapidement le retard par rapport aux pays plus industrialisés.

Fernando de ESTEBAN  
Directeur de l'informatique

# Deployment of 32-bit Client-Server Applications

This document describes how to organise the client computer of the users in order to be able to work with the different 32-bit client-server applications developed by and for the Commission. It is important to understand that the only way up is going 32-bit. Only 32-bit client-server application can get the most out of 32-bit operating systems. In short: 16-bit application are history...

Those 32-bit client-server applications can potentially be developed in all existing development environments and by a variety of different software vendors.

The final idea is, with all the information gathered together here, to structure and automate the process of client installations and keeping in shape client PC's with a minimum of manual interventions. This topic will be discussed at the end of this document.

Within this document, we only discuss 32-bit components and applications. Please refer to the document Deployment of Client-Server Application, (STBD/OD(95)3), for the 16-bit components. The information found there is still valid when deploying 16-bit components and applications on a 32-bit environment.

To be more precise, it is possible to run your existing 16-bit applications on 32-bit platforms and they should still be using the recommendations found the document mentioned above.

Within this document we will, as for 16-bit applications, make a distinction between the infrastructure elements, and application elements.

The infrastructure elements are the operating system, the product runtimes, local database engine if used, Oracle connectivity (SQL\*Net), etc..

In the Configuration de Référence (CR) proposed by DI, you will have installation scripts for all of these components.

For your application, the DI Set-up Wizard will be available to generate an installation script conforming to the new installation standards: un-installation possibility, the registry, long file and directory names, etc.

## 1. The Client Environment

### 1.1. The Components

To use 4GL 32-bit client-server applications on a client PC, a 32-bit infrastructure has to be set-up first. This infrastructure consists of the following components:

- Microsoft Windows 95/NT
  - having the network components installed
- Middleware
  - when using a remote Oracle database: ODBC and the related Oracle driver or a native Oracle driver, both use Oracle SQL\*Net
  - when using a local database: ODBC and the related database driver

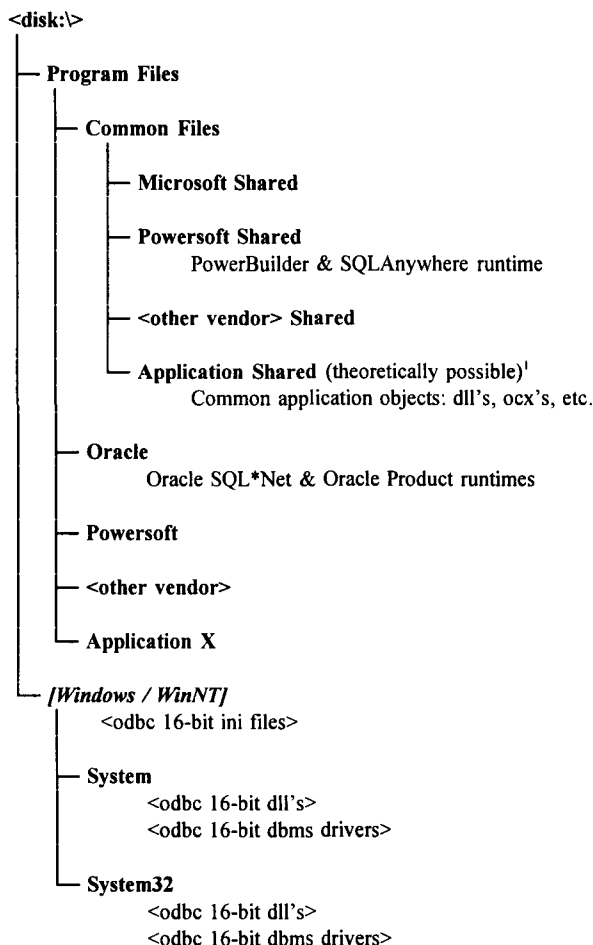
## ■ Runtime environments

- PowerBuilder
- SQL Anywhere
- Microsoft Access
- Microsoft Visual Basic
- Developer 2000

In this document we assume that the set-up of Microsoft Windows 95/NT, middleware and runtimes are complete and running stable. How these components are organised on the client PC's is discussed in the next point.

## 1.2. Global Directory Structure

Schema 1 shows an overview of the proposed Global Directory Structure (from now on referred to as GDS) compatible with the Configuration de Référence (from now on referred to as CR) for client computers.



Schema 1: GDS for the client computer specified by the CR

Note: Using Windows 95/NT, we no longer have a PATH length limitation. Therefore we no longer need to abbreviate the directory names.

The names in *italics* are directories.

<sup>1</sup> If the Shared directory contains common application objects which are used by a lot of applications, it can be added to the PATH. Path settings for shared object used by a limited set of applications should be added to the application's APP PATH.

## Disk

In the schema above, we wrote disk instead of a specific disk character e.g. C:\. Theoretically it is possible to install Windows 95/NT on another disk. However, for standardisation reasons and maintainability, we will assume that the proposed directory structure is installed on the C:\ drive.

## Program Files

On the Windows 95/NT platform, PROGRAM FILES is the directory where all applications should be installed under. In addition, within this directory, every vendor should create its own subdirectory (called VENDOR, where vendor can be Microsoft, Powersoft, Oracle, ..) containing his applications.

## Common Files

Next to the different applications installed within the PROGRAM FILES directory (see above), shared component should be placed within the COMMON FILES subdirectory of PROGRAM FILES. The naming conventions for COMMON FILES subdirectories are VENDOR SHARED (e.g. Microsoft Shared, Powersoft Shared, etc.).

Common files are basically those files which are shared among different applications. They differ from applications in the sense that common files can not function by themselves. A common file needs the environment of an actual application to be able to run (e.g. Microsoft Organisation Chart, Microsoft WordArt, PowerBuilder Runtime). Of course there are exception which acknowledge the rule. Common files such as Microsoft Query and Microsoft Info can be used as a stand-alone application.

Anyway, returning to the scope of application deployment, most common files are runtimes for the different development products we use.

## Windows

Recommended directory for the installation of Microsoft Windows 95/NT.

In case ODBC is used as connection tool to your databases, the windows directory will contain the ODBC related files too. Installation scripts are already available (see Annex for an overview).

### 1.3. What is a runtime environment

After the development of a 4GL 32-bit application (e.g. PowerBuilder), the program code is compiled into an executable file. However, this executable file doesn't contain all the program code. We might consider these executables as being faulty ones. They can not run by themselves.

For each kind of application (e.g. PowerBuilder, Microsoft Access, ...) a whole bunch of code is pre-compiled in a set of DLL's which can be used by those respective applications. This group of DLL's represent in fact the kernel of the concerned application and is called the runtime environment. With this approach, no disk space is wasted by the fact that the runtime environment is stored only once for each kind of application. However, this forces us to put and maintain these runtime environment in a well defined place. Version management becomes crucial. It must be clear that by copying just the executable file to another PC, the application is not able to run. The runtime environment must be copied too and its location should be specified in the PATH. All development platforms working with this concept will expect the existence of their runtime environment.

The standard configuration, set-up by DI<sup>2</sup>, provides those runtime environments for all the used client-server applications in future.

Starting with a well installed client PC, what should be done next to get a client-server application up an running? This question will be answered further in this document.

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<sup>2</sup> see CR: Configuration de Référence

## 1.4. Global installation considerations

When installing a client-server application, some general points have to be checked and specified.

- Identification of the server and the database.
- Some runtime environment only function correctly when their directory is added to the path (e.g. PowerBuilder). This might be verified.
- The working directory of an application is its own directory.
- If the new and currently installed client-server applications are using the same common code modules<sup>3</sup>, be aware that the installed versions are the ones, usable for all the applications. Problems related to wrong shared module versions are hard to trace.

Warning: One must absolutely avoid the coexistence of different code module versions.

Note: Files needed by an application are searched by Windows NT in the following order on the following places:

- in memory
  - in the application directory
  - in the working/current directory (when launching an application, the current directory becomes the working directory)
  - in the System32 directory
  - in the System directory
  - in the Windows directory
  - in the registry using the APP PATH setting (see Application Path on § 3.2.4.)
  - in directories defined in the System PATH
  - in directories defined in the User PATH
- 
- Avoid using initialisation files (ini-files). Both Windows 95 and Windows NT nowadays use a registry where all information is kept. Therefore, 32-bit applications should also start using the same registry. In addition to actually use the registry instead of ini-files, applications need to split up information kept on machine level, and on user level (see The Applications' GDS on §3.1. for ini-file pitfalls and Registry, Ini-file and other information on §3.2. for more information on the registry).
  - The recommended location for runtimes is on the clients. The application installation should verify the availability of the runtime and its version.
  - Consider making the necessary adjustments on your application so that it can function correctly independent of the installation location: on the client side or on the server (refer to Application Components on §3. for more information). If an application supports a server-based installation, it would be a good thing that its installation procedure would also be capable of doing this.

## 2. Infrastructure Components

The next paragraph will discuss in detail how the different components will become installed.

### 2.1. Operating System Kernel

A CR exists for both the installation of Windows 95 and Windows NT. More detailed information on how all different components are installed and were, please refer to the document describing CR. Within the Operation System Kernel, you will find ODBC and OLE.

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<sup>3</sup> Code module: A general name for stand-alone code grouped in a DLL, OCX, etc.

## 2.2. PowerBuilder Runtime

### Destination

Having the global directory structure in mind (see Schema 1), we see that the PowerBuilder runtime becomes installed in the following directory:

C:\PROGRAM FILES\COMMON FILES\POWERSOFT SHARED

Note: both PFC (PowerBuilder Foundation Classes) en PFE (PowerBuilder Foundation Extensions) component are considered as application components. Therefore they become installed within the application directory. Is important to distribute both components as PBD's.

### Environment

The destination directory of the PowerBuilder runtime does NOT need to be part of the PATH environment variable. Because of this PowerBuilder applications could specify the runtime directory within their APP PATH. This means specifying the path into the registry on both Windows 95 and Windows NT per application.

But, because we install the PowerBuilder runtime in the same directory as the SQL Anywhere runtime the destination directory of the PowerBuilder runtime will be part of the PATH environment variable. This means that on the Windows 95 platform the directory is added to the PATH environment variable in the autoexec.bat file. On the Windows NT platform the directory is added to the PATH environment variable included in the "System Variables" which are resided in the registry.

### Versions

Different PowerBuilder runtimes versions become installed within the same directory. The reason why is obvious: Common File directories do not have the notion of a version. And it is possible because PowerBuilder runtime files do have a notion of their version.

Note: when referencing towards PowerBuilder runtime versions, we mean full versions such as PowerBuilder 4.x and PowerBuilder 5.x and not fixes, such as PowerBuilder 5.0.01, PowerBuilder 5.0.02. We do not recommend to install two or more fixes from the same PowerBuilder runtime version on the same machine (one reason is they share the same name).

### Registry impact

Installing the PowerBuilder runtime adds following entries to the registry under HKEY\_LOCAL\_MACHINE:

SOFTWARE\European Commission\PowerBuilder Run-Time 32 bits X.X\Version X.X  
where X.X represents the current version.

## 2.3. SQL Anywhere Runtime

### Destination

Having the global directory structure in mind (see Schema 1), we see that the SQL Anywhere runtime ends up in the same directory as the PowerBuilder runtime:

C:\PROGRAM FILES\COMMON FILES\POWERSOFT SHARED

### Environment

The destination directory needs to be a part of the PATH environment variable. This means that on the Windows 95 platform the directory is added to the PATH environment variable in the autoexec.bat file. On the Windows NT platform the directory is added to the PATH environment variable included in the "System Variables" which are resided in the registry.

### Versions

Different SQL Anywhere runtimes versions become installed within the same directory. The reason why is obvious: Common File directories do not have the notion of a version. And it is possible because SQL Anywhere runtime files do have a notion of their version.

Note: when referencing towards SQL Anywhere runtime versions, we mean full versions such as SQL Anywhere 5.0.x and SQL Anywhere 5.5 and not fixes, such as SQL Anywhere 5.0.01, SQL Anywhere 5.5.03. We do not recommend to install two or more fixes from the same SQL Anywhere runtime version on the same machine (one reason is they share the same name).

### Registry impact

Installing the SQL Anywhere runtime adds following entries to the registry under HKEY\_LOCAL\_MACHINE:

SOFTWARE\European Commission\SQL Anywhere X.X 32 bit runtime\Version X.X

SOFTWARE\ODBC\ODBC.INI\Sybase SQL Anywhere X.X

SOFTWARE\ODBC\ODBCINST.INI\ODBC Drivers

SOFTWARE\ODBC\ODBCINST.INI\Sybase SQL Anywhere X.X

SOFTWARE\ODBC\ODBCINST.INI\Sybase SQL Anywhere X.X Translator

where X.X represents the current version.

## 2.4. Oracle SQL\*Net

### Destination

Having the global directory structure in mind (see Schema 1), we see that Oracle SQL\*Net becomes installed in the following directory:

C:\PROGRAM FILES\ORACLE

Oracle for itself does not yet make the split up between the so called Common Files and other PROGRAM FILES. To respect the vendors installation routine behaviour, we decided to keep this way of working.

Note: if one decides to use the Oracle Installer, be aware of the fact that it does not allow directory names having spaces. But you can mislead the Oracle Installer by using the MS-DOS name of your directory (e.g. C:\PROGRA ~1\ORACLE)

### Environment

A subdirectory of the destination directory needs to be a part of the PATH environment variable. This means that on the Windows 95 platform the directory is added to the PATH environment variable in the autoexec.bat file. On the Windows NT platform the directory is added to the PATH environment variable included in the "System Variables" which are resided in the registry.

This directory is

C:\PROGRAM FILES\ORACLE\BIN



## 2.5. ODBC

### Destination

Having the global directory structure in mind (see Schema 1), we see that the ODBC and ODBC components become installed in the following directories:

For Windows 95: C:\WINDOWS; C:\WINDOWS\SYSTEM

For Windows NT: C:\WINNT; C:\WINDOWS\SYSTEM32

### Environment

The installation or usage of ODBC has no implication on the environment.

## 3. Application Components

### 3.1. The Applications' GDS

An application can contain two parts:

- a fixed part or the application objects
- and application local data: a flexible part which can be application data, initialisation files, etc.

Only the second part is liable to changes.

Due to the fact that only the second part is liable for changes, the first part could easily become installed on a network share. These we call Server based application installations. In case the application is installed on the client PC, we talk about Client based application installations.

Warning: be aware, an application needs to be designed to supports Server based installations. To support it, the application needs to make a clear difference between application settings and user settings. When thinking Windows 95/NT, you directly recognise the need for a registry part having local machine settings, and one for user settings.

The reason for the above warning is evident: most application use initialisation files (ini-files) which are used for both application and user settings. When using Server based application installations, the server part generally is read-only. Keeping user settings becomes difficult at that moment.

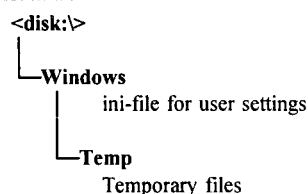
#### 3.1.1. Application Objects

##### Server based installations

The directories of our interest are those, used for the client-server applications. We propose following directory structure, compatible with the CR.

##### Client Part

Notice that besides some possible ini-files (which are not recommended), temporary files and shortcuts towards the application, nothing becomes installed on the client side. The impact is therefore is minimum.

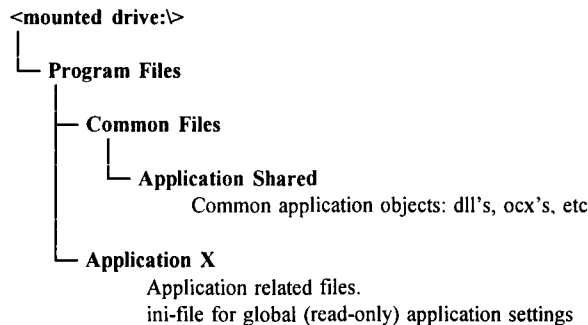


Schema 2: GDS on the client for a server based installation

Next to the client files, we need the server part.

## Server Part

On the server side we propose the same directory layout as presented for Client based installation.



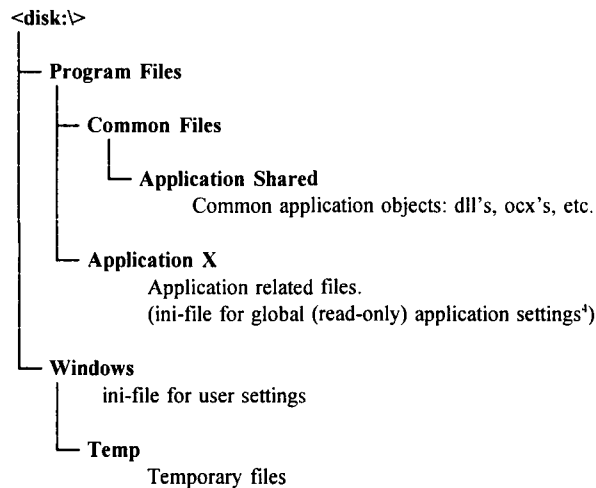
Schema 3. GDS on the server for a server based installation

See further for the discussion on application and user-specific information storage.

## Client based installations

The first part only changes between different application versions. Meaning that while the user is working with the installed version, no modifications are made to the files (part from the user-settings). As a result, these object do not need to be part of the backup.

We propose following directory structure, compatible with the CR.



Schema 4: GDS for a client based installation

The directory structure showed in Schema 4 groups together all the applications in one main directory: PROGRAM FILES. For each application there is a separate sub-directory containing all needed objects.

Not only the runtime environment can contain shared objects (see Global Directory Structure), also for the application we foresee a shared directory, APPLICATION SHARED, within the therefore foreseen directory COMMON FILES. Here we place the objects common for more than one application.

<sup>4</sup> note that you only use this ini-file when your application is prepared for server-based installations. Refer to Server based installations on §3.1.1. for more information.

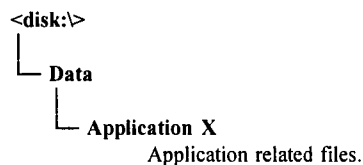
It is recommended to use the application directory as working directory<sup>5</sup>. A lot of window applications install certain objects in the windows-system directory. We do not encourage this working method to avoid that the windows-system directory becomes a dustbin. The windows and windows-system directories should only contain objects related or closely related to the operating system.

See Registry versus Ini-files (§3.2.1) for the discussion on application and user-specific information storage.

### 3.1.2. The Applications' Local Data

The second part is liable to changes. E.g. data files when a local database is used, etc. For security reasons, it might be interesting that they are part of the daily backup routine. Therefore they should be placed in that particular place which is part of the backup.

We propose following directory structure, compatible with the CR.



*Schema 5: GDS for the Applications Local Data specified by the CR*

Schema 5 groups together all the user files in one main directory: DATA. For each application there is a separate sub-directory containing all user files for that particular application.

Please replace the name used here for the private user directory with the name used at your site. The actual name is of no importance, only the fact that the applications' local data is placed within a backed up directory is important.

Client/Server applications most often do not use any kind of local data. The data manipulated by the application is stored in a database residing on a network server. A scenario like this does need any backup considerations.

## 3.2. Registry, Ini-file and other information

### 3.2.1. Registry versus Ini-files

On 16-bit platforms, we only had ini-files. With the introduction of 32-bit Microsoft platforms, we now have a Registry at our disposition. The registry not only replaces the older ini-files, it contains a lot more.

The registry has the advantage of being a centralised storage of information, splitting up information belonging to a user or to the system.

For all new 32-bit applications, registry usage is recommended. For older applications, which become migrated towards 32-bit platforms, one needs to consider migrating ini-file usage towards registry. These kinds of migrations imply the replacement of a very limited set of functions.

One of the advantages of registry oriented applications are the automatic support for Server based application installations (see Server based installations §3.1.1). To support these type of installations, the application needs to make a clear difference between application settings and user settings. When thinking Windows 95/NT, you immediately recognise the need for a two distinct registry parts: one containing local machine settings, and one for user settings.

<sup>5</sup> The working directory is the place where the application objects can be found. It can be specified in the Application shortcut properties.

Most application use initialisation files (ini-files) which are used for both application and user settings. On the other hand, when using Server based application installations, the server part generally is read-only. At that moment, keeping user settings becomes impossible. A workaround implies the usage of two different ini-files.

### 3.2.2. Registry information

The set-up program does not allow handling your application registry keys. Therefore you need to prepare a \*.REG file containing the necessary application keys which can be run after the set-up.

Note: registration files, \*.REG, can either be made by hand (possible cause of mistakes) or become generated by the Registry Editor. We always preferred the second option. First we manually create the necessary registry entries and afterwards we extract them via the same Registry Editor: Registry | Export Registry File....

#### Application information

Application information is stored in the registry under HKEY\_LOCAL\_MACHINE because it concerns the machine itself.

Use the following subkey:

```
SOFTWARE\CompanyName\ApplicationName\Version\SectionName
```

For example, use

```
SOFTWARE\European Commission\Test\1.0\Database
```

as a key where to store information related to the database.

#### User Information

User preferences are stored under HKEY\_CURRENT\_USER because it concerns only the user currently logged on. HKEY\_CURRENT\_USER is in fact a pointer to all know users. The list of know users is kept under HKEY\_USERS.

As for the local machine, the subkeys to use are the following:

```
SOFTWARE\CompanyName\ApplicationName\Version\SectionName.
```

For example, use

```
SOFTWARE\European Commission\Test\1.0>Main Window
```

as a key where to store information related to the last position of the main window defined by the user.

### 3.2.3. Ini-file information

On the 32-bit platform, ini-file or no longer recommend for use. Therefore we will not present any standards on their usage.

### 3.2.4. Other

#### Registry keys for the installation

The set-up application must handle changes to other keys. This should correctly be handled by the installation template used by the set-up wizard.

## Application Path

HKEY\_LOCAL\_MACHINE

SOFTWARE\Microsoft\Windows\CurrentVersion\App Paths\<>AppName.EXE<

The default value of previous indicated key is the full pathname of the application. If the user simply starts (Start | Run) the application without specifying where it is, Windows 95 will find it even if it does not reside in a directory specified within the path environment variable.

In addition to the specification where your application can be found, you can specify here an extension to the PATH environment variable. This extension is only visible to this application and is prefixed to the existing PATH contents.

An example. Lets presume the contents of your path environment variable is the following:

PATH=C:\WIN95\COMMAND;C:\WIN95

and within the registry you have following entries:

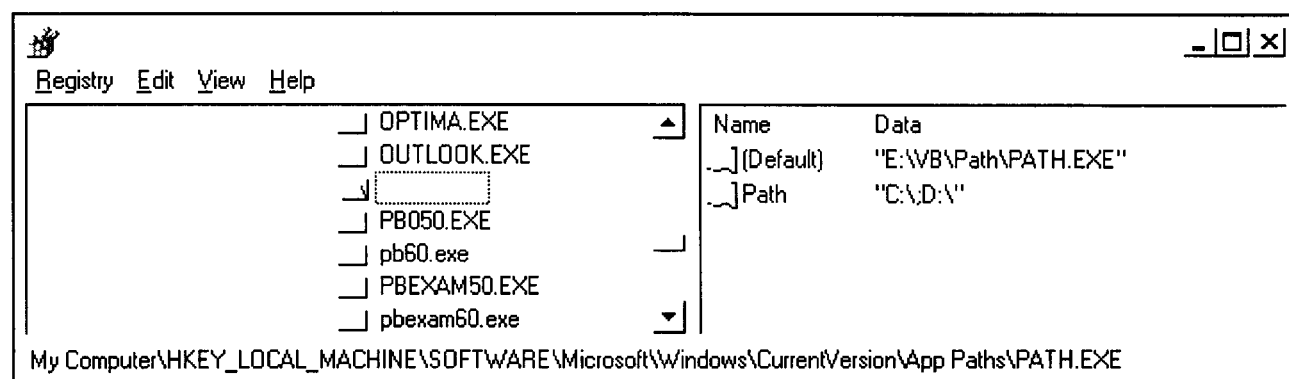


Table 1: Registry specification for the PATH.EXE application

When running PATH.EXE, Windows 95 first scans the registry searching the application. If he finds it, it launches the application extending the current path with the optional path registry entry.

In our example this results in the following path setting:

PATH=C:\;D:\;C:\WIN95\COMMAND;C:\WIN95

## Un-installation information

HKEY\_LOCAL\_MACHINE

SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\<>Application<

This key, should contain two values: Display Name and UninstallString.

DisplayName is the title that must appear in the list of the available un-install programs within the Control Panels Add/Remove Programs applet. UninstallString is the full pathname of the un-installation program to launch if your application becomes un-installed.

## Help Path

HKEY\_LOCAL\_MACHINE

SOFTWARE\Microsoft\Windows\Help\<>filename<.hlp

Previous key should contains as a value the name of the help file and its according path. This allows the help engine to find it without you having to specify the full path.

## OLE keys

If your application is an OLE server, you must also register it in the registry, under the key

HKEY\_CLASSES\_ROOT

The keys to install are discussed in the PowerBuilder on-line books.

### Shared DLL usage count

HKEY\_LOCAL\_MACHINE

SOFTWARE\Microsoft\Windows\CurrentVersion\SharedDLLs

Previous indicated key contains a list of DLLs each having a usage count. If your application uses for instance CTL2D32.DLL, it must increment the counter. If the application becomes un-installed, the un-installation program should decrement this counter and propose suppression if the counter hits zero.

### Registering the OCXs

There are different solutions to register OLE components in the registry:

- by making a program inserting the keys in the registry directly
- by creating a \*.REG file containing the keys to add
- by self registering the OCXs (the same apply to the DLLs or the EXEs if it is an OLE server).  
This only works if the OCXs in question support it.

You can check if it is supported in the version information. When supported a keyword OLESelfRegister is present.

In case of a DLL or OCX, first it must be loaded where after the DllRegisterServer function can be called. The CTLREG utility on MSDN is a good example on how to realise that operation. In case of an EXE, run it having the command line flag /REGSERVER specified.

### 3.3. Application installation considerations

Prior to the installation of an application, one should verify all remarks specified in the following checklist. All items discussed earlier in this document are listed here.

#### Checklist

- The set-up of the client environment is assumed to be complete (check the points in Global installation considerations on page 5).
- Put all objects in the right locations.
- Applications using ODBC connections need ODBC data sources. They are specified using the ODBC applet available in the Control Panel if ODBC is installed.
- Double-check the versions of the common used runtime and application objects.
- Add shortcuts to the Start Menu for application launching. Remember the standard: applications having only one shortcut may place their shortcut directly in the Programs menu. Application having more than one shortcut should use a submenu within the Programs menu.
- Test the application to be sure that everything works properly:
  - connect the application
  - execute test that guarantee the existence of all external code modules
  - have a global look at the application: check for missing graphics (BMP's, icons, etc.)
- Make use of the registry instead of ini-files.
- Verify the footprint of your applications. Documents on footprint calculations are available at DI.
- If your application needs to be able to run both on the client and on the server, be sure you made the necessary modifications.

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# Euro changeover of information systems

The introduction of the euro will be one of the most important changes in the economic landscape of Europe in the next few years. The changeover to the euro will have a number of practical consequences for the day-to-day operations of enterprises and their information systems. Many people would agree that it is important to be well prepared for the euro and that careful planning is essential. However, recent surveys have shown that few organisations, except perhaps large banks and insurance companies, are actually preparing themselves for the introduction of the euro.

This article provides an analysis of the functional and technical problems of the changeover to the euro. These problems determine to a great extent how much time is needed for the changeover and determine whether a particular changeover strategy is feasible. For a more detailed discussion of changeover strategies reference is made to the exposure draft "Preparing Information Systems for the Euro" (DG XV Internal Market and Financial Services, Brussels 1997).

## Scope of the euro changeover

To prepare an enterprise's information systems for the introduction of the euro it is important to establish which information systems are affected by the euro. The basic rule is that:

*Only systems that are used to process financial information in one of the participating national currencies can be affected by the euro changeover.*

This means that many information systems, that are dealing with non-financial information, will not be affected by the euro at all. Systems that will be affected by the euro include for instance accounting software, electronic payment systems, payroll systems, financial planning and budgeting software, and legal databases containing financial contracts.

The changeover to the euro is often compared to the year 2000 problem, probably because both are related to information systems and occur at roughly the same time. However, the basic rule for the year 2000 problem is that:

*Only systems that use dates are affected by the year 2000 problem.*

This means that hardware and software that is not used to process financial information can

still be affected by the year 2000 problem. Therefore, the number of systems affected by the year 2000 is likely to be greater than the number of systems affected by the euro changeover.

From a practical and organisational point of view it may be convenient to deal with the euro and the year 2000 problem at the same time. However, the two problems are fundamentally different. Solving the year 2000 problems means ensuring that the information system will continue to do what it always did, calculate the dates correctly. This makes the year 2000 problem largely a technical problem that needs technical solutions. It also means that most of the actual work on remedying the year 2000 problem will have to be done by the information technology ('IT') department of the enterprise.

Solving the euro changeover issues often requires that functionality must be added to the financial information system. Adding functionality means that the users must be heavily involved in first identifying problem areas and then in finding the actual solutions for these problems. It also requires management to take decisions on the functionality to be added, because these decisions will affect the daily operations of the enterprise during the transitional period. Therefore, the euro is not only an IT problem.

## Functional aspects of the changeover

The introduction of the euro has already been described as a unique event in history. It is this uniqueness that causes most of the problems from an information system's point of view. The introduction of the euro is unique in the following respects:

- During a certain transition period two different currency units will be used within one country.

Therefore, enterprises will be faced with situations in which they receive financial information in both euro and the national currency units (input functionality problem). Enterprises may be required to produce financial information either in euro or the national currency unit or in both (output functionality problem).

It may not be possible to change all information systems over to the euro at the same time. This means that information systems working in the national currency unit will have to communicate with systems working in euro (interface problem).

- At a certain point in time enterprises will have to switch over to the euro completely. The historic financial information, denominated in the national currency unit, that an enterprise still needs after the changeover to the euro must be converted to the euro unit (conversion problem).

The input and the output functionality problems can be solved in several ways:

- Manual solution – This solution requires all conversions to be done by hand. Where transaction volumes are low this may be a solution, but there is a high risk of errors.
- Modify information systems – The enterprise could decide to add functionality to the existing software to deal with the problems. This solution requires a significant amount of planning and time to complete. Therefore, it is important to start early.
- Parallel systems – In some cases an enterprise can decide to run two instances of the same software. The first instance of the software could process information in euro, while the second instance processes information in the

national currency unit. However, this may not always be possible from a technical point of view, there is the risk of data corruption when the wrong currency unit is processed by the wrong instance of the software, and at the end of the day the output must be combined in some way.

Solving the interface and conversion problem is more complicated than it looks at first because of rounding issues (which are discussed later). Developing utilities that can convert historic data and that can link systems that work in different currency units is not a straight forward exercise.

## Different types of systems

Essential in the discussion of different types of systems is the term 'base currency'. The base currency is the currency unit in which a financial information system processes and stores financial information. The extent to which the enterprise will experience the input functionality problem and the output functionality problem greatly depends on the type of information systems that it uses. Several types of systems can be distinguished:

- Single currency system – Most enterprises use a single currency system. This means that in order to process financial information originally expressed in another currency unit it must be translated manually into the base currency. These systems have substantial disadvantages when changing over to the euro, because they do not allow the user to input data in another currency unit and cannot generate output in another currency.
- Multi-currency input/output – These systems are like single currency systems, however, in this case the user can input data in several currencies and generate output in several currency units.
- Multiple base currencies – These systems appear to be the same as multi-currency input/output systems. However, they offer a high quality audit trail that makes it possible to trace a transaction from beginning to end (from input to output of processed data) in two base currencies. This can be of special importance in connection with certain



rounding problems. The main advantage of a system with multiple base currencies is that the enterprise can start using the euro whenever it wants to do so. However, systems with multiple base currencies are significantly more expensive to implement than the other systems mentioned.

### Technical aspects of the changeover

In order to implement additional euro functionality properly, a number of technical issues need to be taken into account. Being aware of the potential technical problems is important in planning the changeover to the euro. The choice between a 'big bang' and a 'gradual' changeover will often depend on the technical feasibility of either strategy.

#### *Rounding*

A changeover to the euro will mean that amounts previously denominated in the national currency unit must be converted to the euro. The conversion in itself is not difficult, but problems arise because of rounding differences.

The euro Regulation adopted by the European Commission does not allow the use of inverse exchange rates (if the exchange rate is 3.00 then the inverse exchange rate is 0.333333) and cross rates because these generate rounding problems. Therefore, financial information systems that use either inverse exchange rates or cross rates will need to be modified.

The conversion and rounding rules in the euro Regulation allows for an intermediate rounding of "at least 3 decimals" when converting from one participating currency unit to another. This means that an accuracy of 4, 5 or more decimals is also allowed, however, that will not necessarily lead to the same outcome.

A serious rounding problem exists in relation to cumulative amounts, as can be seen below:

	DEM	EUR
Item #1	100,000	51,598.26
Item #2	100,000	51,598.26
Item #3	100,000	51,598.26
Item #4	100,000	51,598.26
Total	400,000	206,393.04
Check	400,000	206,393.02
Difference	0	0.02

Applying the conversion and rounding rules to individual items and adding up the individual outcomes does not necessarily lead to exactly the same outcome as applying the rules to the cumulative amounts. This in itself is nothing new, but may still lead to problems.

Another rounding problem arises when amounts are converted back and forth between currencies (reconversions). When converting amounts to a different currency some accuracy can be lost. For example:

where EUR 1.00 = NLG 2.17248, the following calculation can be made NLG 198.10 = EUR 91.19 = NLG 198.11. It is important to be aware of these rounding differences in reconversions.

From an economic point of view the effects of rounding differences will normally not be very serious, because the differences are small and the differences will tend to offset each other. Technically speaking the rounding differences are a problem:

- Searching – Systems that search for transactions on the basis of their amounts, will not work as expected because they will not find transactions with a slightly different amount;
- Matching – After two transactions that are not exactly equal are matched a small outstanding balance remain, which must be dealt with separately;
- Checks and balances – A well-known check in batch systems is to test whether (a) the opening balance plus (b) all transactions (the batch) is equal to (c) the closing balance. It is easy to imagine the effect of rounding differences on such a test. Most information systems would conclude that an error was made during the processing and then reverse (rollback) the entire batch. To avoid situations where the financial information system refuses to process a certain batch, the checks and balances based on cumulative amounts should be defined properly in order to avoid the rounding problem.

#### *Converting historic data*

Many information systems keep a history of past

transaction amounts and previous balances. Relational database theory requires normalisation of databases to ensure that information systems do not store the same information more than once. This is a sound principle, however, for performance and other practical reasons software developers often find themselves in a position where they have to depart from this principle. Therefore, many financial information systems store the same information more than once (in a summarised form, as cumulative figures, or checksums).

When converting historic data it is important to ensure that data that is stored more than once remains consistent. If the underlying information is converted to euro, but the cumulative or summarised data is not converted to euro properly, financial information systems may produce either unreliable data or refuse to operate normally.

The conversion of very large databases will require a substantial amount of processing time and could take more than a week. Where the enterprise relies on its information systems to run its day-to-day business, the time needed for converting the data may become an important consideration in planning the changeover.

Special care needs to be taken to avoid information systems accidentally combining amounts expressed in euro with amounts expressed in the national currency unit (data pollution). Mathematically there is no problem with adding up these amounts, but the result of the calculations will be complete nonsense.

#### *Decimals*

Some national currencies are normally expressed without decimals (examples include the peseta and the lira). Financial information systems that were designed to work with amounts expressed in such currency unit usually cannot handle decimals. As the euro is subdivided in 100 cent it is necessary to modify these systems so they can handle two decimals.

#### *Thresholds*

Very often financial information systems use

threshold values that define the actions of the system, for instance:

- Generating reports – Financial information systems often contain queries like ‘show all amounts greater than 10,000 and older than 30 days’. It makes a big difference in real terms whether you apply the 10,000 threshold to an amount denominated in Belgian Francs or to an amount denominated in euro;
- Calculations – Systems can have built-in rules for making certain calculations such as ‘when the order is for less than 10,000 charge 200 for postage and packaging’ that will need to be modified;
- Authorisation level – In many enterprises junior employees may only authorise transactions up to a certain threshold value. It is undesirable if junior employees are suddenly allowed to authorise transactions up to EUR 10,000 where the threshold was previously set at BEF 10,000;
- Validity checks – In order to improve the quality of data input, information systems perform validity checks on data and use data input masks. Validity checks (that for instance test whether an amount falls within a certain range that is considered reasonable) will work differently than expected when the data is input in a different currency unit. Checks on the reasonableness of amounts or prices per unit will no longer function as expected. Data input masks (that for instance filter out certain keystrokes such as the decimal point “.”) may need to be modified to accept decimals.

How the thresholds can be changed will depend on the design of the financial information system. Changing them can be very cumbersome when they are ‘hard coded’ in the software. Changing validity checks and data input masks that are built into the ‘forms’ that an application uses, is easier as this does not affect the software directly. Finally, where the thresholds are stored in a special look-up table or special file for parameters, it may be quite easy to change them.

#### *Displaying two currencies*

During the transitional period, and possibly

sometime thereafter, it would be convenient to display the same amount both in the national currency unit and the euro. However, the amount of space (number of columns) available on computer displays and printed reports is limited. Adding a column to an existing screen layout or report may require some serious redesigning. Functionality must be added to the information system to enable it to show the information in two currency units. Including totals and subtotals when presenting two columns of figures (one in the national currency unit and the other in euro) will certainly give rise to the rounding problem associated with cumulative amounts.

In many instances financial information systems display amounts under the implicit assumption that all amounts are denominated in the same currency unit (for instance all amounts are Deutsch Marks). Where information systems are capable of displaying amounts in one of two currency units, or in environments where not all information systems use the same currency unit, it is important that all amounts displayed or printed are properly labelled. If this is not done the resulting confusion will surely lead to a higher number of errors.

#### *Financial models*

Some enterprises use statistical models based on historic data expressed in the national currency unit. In order to apply these models to euro amounts it may be necessary to revise the parameters of such models. Changing non linear models (such as certain mathematical models, neural networks, and other systems trained using historical data) may be particularly complicated.

Financial models are often implemented as a spreadsheet model. The major advantage of spreadsheet models is that users with a very modest background in information technology can build these models themselves. Modifying spreadsheet models so they will work with euro instead of the national currency unit is extremely complicated for several reasons:

- Spreadsheet models can be very large. A spreadsheet of one megabyte will contain 20,000 to 25,000 individual spreadsheet cells;
- There are different types of spreadsheet cells,

they contain: i) text, ii) formulas, iii) non-financial numerical information, iv) financial numerical information, v) dates, and vi) links to other spreadsheets or data sources. In order to prepare spreadsheets for the use of the euro only the cells with financial numerical information and some cells containing formula's must be modified. Identifying only the right cells to modify, not forgetting any or selecting too many, is a lot of work;

- Spreadsheet models are mostly built by users with a modest background in information technology. Consequently, spreadsheet models are not built according to any standard methodology, are poorly structured, and are completely undocumented. Of course there are positive exceptions, but they are few;
- Spreadsheet models often duplicate some information that is also recorded elsewhere. However, modifying the original data source will usually not update the same information in the spreadsheet model. Therefore, there is a high risk of creating inconsistencies between spreadsheet models and other information systems.

Because of the great variety in spreadsheet models it is usually not possible to design utilities that can do the conversion automatically. Therefore the preferred option will often be to rebuild the spreadsheet model, rather than trying to convert an existing spreadsheet model.

#### **Conclusion**

The functional and technical problems associated with the changeover to the euro are quite diverse. Preparation and planning for the euro changeover should take these problems into account in an early stage in order to avoid problems later on. Some changeover strategies may not work in particular cases because they require an excessive amount of resources or because of their technical complexity. Therefore, planning for the changeover should start soon.

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# MIGRATING TO WINDOWS NT 4.0

## Security issues and solutions

This article discusses some of the network security issues encountered recently when the Delegation in Australia migrated to a Windows NT Server 4.0 environment. I do not pretend that it is a comprehensive treatment of those issues. Rather it is a collection of interesting points that I hope may be of use to anyone undertaking a similar task in the future, particularly in the context of a Delegation, but also during the implementation of the Next Technological Platform. If the detail is lacking in any particular part of the discussion below and you would like to know more, please feel free to contact me by email to fill in the gaps.

### THE MIGRATION TASK

To help put my comments on security in context, here is a brief description of the network upgrade undertaken at the Delegation.

#### The existing installation

The existing installation was a Windows for Workgroups 3.11 peer-to-peer network running across RJ-45 linked thick ethernet cable using NE2000 compatible network interface cards. Use of the network was limited to Microsoft Mail and sharing a large multi-user database.

Some factors motivating the migration were:

- The limitations of Windows for Workgroups 3.11 in regard to many new 32-bit applications;
- The less than robust performance of Trumpet Winsock for stand-alone internet connections;
- The problems of maintaining network security in a peer to peer environment of non-specialist users;
- The absence of all but rudimentary backup mechanisms in the existing network;
- A desire for groupware type functionality for internal information sharing; and
- The probable need for a path to network-wide internet and internet e-mail access for users in the future.

#### The post-migration installation

After migration a Windows NT 4.0 server machine was in place with Windows 95 as the operating system on the sixteen client PCs attached to it. Features of the new network were:

- Centralisation of all data on a physically secure NTFS volume;
- Daily tape backup allowing retrieval of data from as long ago as three months;
- Centralisation of all databases with secure, selective and differential access across the network;
- A set of shared folders differentially accessible by all users allowing groupware type information sharing;
- Centralised password and security administration including an enforceable password policy;
- Robust and secure stand-alone internet connections with no exposure of data to the internet;

- Improved performance of all applications and facilitation of 32-bit applications;
- Centralisation of key Microsoft Office templates; and
- A clear path to secure e-mail and internet services for all client computers for the future.

## PLANNING FOR SECURITY

### Choice of protocol in an environment with internet access

The protocol chosen for the new environment was NetBEUI, which is readily installed under Windows 95 and NT. NetBEUI was chosen because it is a non-routable protocol. In an environment with several dial-up internet connections this was desirable so that data files on the new server could not be (purposely or inadvertently) routed out of the building via workstation computers with modems running TCP/IP (i.e. computers connected to the internet). Using NetBEUI, no connection is possible between the server and the internet due to the lack of a common language between the two. In a worst case scenario, exposure of data to the internet would be restricted to those files that the user logged on at the workstation could access. Even these would have to be saved to the local workstation hard drive, then distributed to the internet - something only possible via a fairly prolonged physical attack.

In an isolated NetBEUI environment, workstations are able to enjoy internet access and server-based data storage with relative safety, the only restriction to functionality being that internet files cannot be directly saved to the server. The limitations of the NetBEUI protocol (e.g. difficulty monitoring performance and configuration, and diminishing performance with more network nodes) were not a problem for a network of less than twenty computers with low physical dispersement.

### Planning for wide scale internet access

Even though there was no requirement at network setup to provide workstation computers with one or more internet services via the LAN, we felt it was nonetheless important to make allowances for the future. The highest level of protection against data exposure to the internet is provided by stand alone machines. This system, however, can cope with only limited demand and is inconvenient for users who have to leave their desks and go to an isolated machine (if it is available) to send email and download documents. It would take much too long to go into the finer points of facilitating safe internet access but I will give a brief description of a configuration I believe will be very workable if the decision is ever made to provide internet services over the LAN.

The configuration I suggest (and which has been very successful in other networks I have configured) is what is known as a 'victim server' model. In this model an NT Server 4.0 computer is setup as a stand alone server on the LAN and configured only with the TCP/IP protocol so that it cannot communicate with the Primary or Backup Domain Controllers (which run only NetBEUI and holds all data). To subsequently provide internet services to workstations the victim server is set up first as a DHCP server to provide IP addresses to client computers, then as a proxy internet server (using, for example, Microsoft Proxy Server 3.0). Firewalls (or simple blocking of traffic on TCP/IP ports 137-139) can be added for additional security, but in any case the security problem has been reduced to a loss of service attack or a download of a virus (which can be guarded against to some extent with appropriate software such as Dr Solomon's). A further advantage of this system is that the victim server can be reconfigured, rebuilt or taken off-line as required without interruption of other network services. Provided thorough user education and accountability is also put in place, full internet access can be provided over the network in this manner without exposing a single byte of data to the internet.

## Remote access

The nature of a Delegation's work means that users often travel, and it is useful if they can be provided with computer services while on mission through a laptop with dial-in access to home base. Window NT 4.0 provides good security for such remote access, but this must be implemented with care and precision. To ensure the highest level of security, I suggest the following should be observed:

- The Remote Access Service (RAS) should only be enabled when it is known that a legitimate user may require it;
- Only those users currently using the service should have dial-in access granted (configure this for each individual in User Manager for Domains);
- Access should only be granted to the dial-in server, not to the entire network (configure this globally under Remote Access Service properties in the Network applet in Control Panel);
- RAS should only accept encrypted authentication and data encryption should be enabled (this, however, does slow data transfer); and
- Call back to a specific number (a mobile, for example) should be enabled when possible and practicable.

All the above features are supported under Windows NT Server 4.0 and Windows 95.

## Password policy

It goes without saying that passwords - both network and on screen savers - are critical to security. Proper use and security of passwords should be stressed to users and made a condition of the implementation of new services. There are a number of things an administrator can do make sure passwords of reasonable safety are used. The *Windows NT Server 4.0 Resource Kit* provides a useful utility called *Passprop* which

can require passwords to contain upper and lower case and non-alphanumeric characters. This can be used in combination with minimum-length and non-reusable passwords (enforceable under the *Policies* settings of User Manager for Domains) to enforce a sound software-based policy.

At the extreme end of password policy I have read reports that - given the power of modern hardware - non-alphanumeric, mixed-case passwords of twelve characters or more should be enforced! None of this is of much use, however, if users keep their password on a Post-It note beside their PC. The issue of user education is too large to deal with here, but here is the approach I found worked with our upgrade:

- Consult with users and make clear that trade-offs of convenience (such as having to memorise passwords) are necessary for improved functionality.
- Upgrade gradually.
- Anticipate users problems and questions where possible, rather than waiting for them to tell you.
- Provide peer support.
- Provide focused helpdesk-style support in the early stages of change.
- Make security an issue by drafting agreements with users that must be signed in return for new services such as email.
- Make administrators accountable for their users' data and data privacy, and also develop a policy for dealing with users who transgress security guidelines.

## Physical security

The security precautions described above all presuppose good physical security. If an intruder can gain physical access to a server, no guarantee of security can ever be made. At one

extreme an intruder could simply steal the hard drives from the computer, then install them in a computer elsewhere. At the other extreme, someone could cut power to the machine and reboot from a floppy disk.

The New Technology File System (NTFS) is no protection from such physical attacks. A utility called NTFSDOS (available from the internet), for example, enables NTFS volumes to be mounted in DOS. Once someone has access to hard drives using this utility they can copy Security Account Manager (SAM) information from the registry, then, at their leisure, load it onto another NT Server computer and use password cracking software (also available from the internet) to obtain a list of usernames and passwords. Armed with this list there is barely a limit to the damage or unauthorised monitoring that can be done. What is worse is that the only entry in the system log will be of a shutdown and reboot, and you may not even get that if the intruder knows enough to crack the administrator's password and edit the system log.

Half measures in physical security of hardware are rarely viable and usually dangerous. It is certainly possible to disable or remove floppy drives, but what is to stop someone fitting another storage device? What about parallel ports? Modems can be replaced with Zip drives. And what about expansion slots? Cases can be opened. Hard drive controllers can be rearranged. One must also ask how much functionality is lost when pieces of computer hardware are disabled or locked up. What is the ultimate cost of implementing and navigating elaborate physical security?

The only realistic solution is to physically secure all servers, preferably in a separate office or cupboard. A good policy is to eliminate all non-administrator access to servers other than through the network connection. Windows NT is designed to protect against intrusion down the network cable. It is not designed to protect against physical attack.

*(And don't forget the bits and pieces!)*

There are also a few items that are easy to overlook when physically securing a server:

- Repair disks. These contain compressed copies of the SAM that can be used to obtain usernames and passwords if stolen.
- Backup tapes. For obvious reasons.
- Network cabling. The integrity of network cabling should be checked periodically to ensure it has not been tapped or altered. Snoopers could only obtain encrypted network authentication information from here (by setting a network adapter card on the physical network set to 'promiscuous' mode). Under some circumstances, however, this could pose a risk.
- Hubs. These should also be regularly checked and correlated with the network topography to ensure that only permitted connections are present. Active hubs - that is, hubs that send network packets only to the recipient computer rather than to everyone - are a very secure (if expensive) choice for a network, but they should be kept physically secure like any other piece of equipment.

## SET UP ISSUES

### Creating accounts

Again this is a very complex area which varies according to network demands, but here are a few ideas I have found useful in setting up a scaleable yet secure user accounts structure:

- Design a username policy early and stick to it (e.g. john1, john2).
- Rename the built-in administrator and guest accounts according to your naming policy. This makes intruders guess not only the password, but the name of the Administrator.
- Make the effort to learn about and implement local and global groups. This is important. It may seem easier at the beginning to assign

permissions to individual users rather than bother with groups, but this quickly gets out of hand and you are likely to leave gaps in file permissions. In the longer term lots of time will be saved by using groups.

- Assign users to local and global groups only to the level required for a task and not more (e.g. don't assign users who only have to perform backups administrator rights)
- Audit accounts regularly and disable accounts that are not in use.
- Keep accounts, groups and policies as simple as possible. Complexity leads to security holes. Think globally, implement simply.

### Sharing resources

Here are some principles I have found useful when sharing resources:

- Give each user a home folder named after their username. Share each private folder using the sharename *username\$* and connect each user at logon using a logon script containing 'net use p: \\server\username\$' (Windows 95) or by assigning a folder under home folder in the user accounts database (Windows NT). The fact that \$ shares are invisible will prevent other users browsing the network and attempting to gain access to private files and discovering security holes.
- Make all volumes NTFS and assign permissions on the NTFS permissions level rather than the share permission level. A share shares everything below it, so these should be planned carefully and kept to a minimum.
- Centralise data and printers on physically secure NT Servers. Resources cannot be protected outside of physically secure servers. Centralisation also has the added advantage of allowing you to disable the browser service on workstations (e.g. delete file and printer sharing in Windows 95). This can really speed up the network.

You may also wish to implement remote administration of workstations in order to disable password caching, deny Windows access without network authentication, or provide a logon banner.

### AUDITING

It is important to implement an auditing policy from the outset to give yourself a reasonable chance of discovering security gaps and breaches. One of the keys to a good audit policy is to filter the system, application and security logs in methodical ways that make information intelligible. To discover holes and breaches it is necessary to target areas where breaches are likely and anticipate the traces such a breach would leave in the logs. This only comes with experience, so it is important to set aside time each week to analyse logs and to experiment continually. It may seem like wasted time, but it is an indispensable part of network security. *Above all, never delete logs.* They take up space but without them you may never be able to determine how often a breach has occurred or for how long.

It is also wise to put the Microsoft security site (<http://www.microsoft.com/security>) on your 'audit' list. Visit it regularly. It often contains useful security information and software downloads. The sooner you know about issues and solutions the better.

### CONSIDER WORKING TOWARDS C2 SECURITY OR AT LEAST BE AWARE OF AND IMPLEMENT SOME OF ITS PRINCIPLES

C2 security is a high level standard for network security developed by the United States' National Computer Security Centre. It can be implemented on Windows NT Server 4.0, although in some cases it may be somewhat restrictive or administratively cumbersome. The *Windows NT Server 4.0 Resource Kit* contains a C2 Manager tool that takes you through achieving this level of security step by step. C2



security is described in detail and defined in the *Department of Defense Trusted Computer System Evaluation Criteria* (known as the 'Orange Book' or 'The Bible'). For those interested, this is probably the most important and informative document on computer security available today.

## FINAL WORDS

In my experience one of the most oppressive conceptions of computer security is what I term the 'mystical' view. According to this view it is no use trying to make a computer network secure because some mystical hacker always knows a way to infiltrate and destroy it. Documented cases are very rare (there's always a conspiracy theory to explain that), but somehow no network is ever safe. We should simply give up.

While it is important to keep possible security breach scenarios in mind, this mystical view is simply ludicrous. Computer networks, being the epitome of applied logic, operate on very clear principles. Security problems *can* be anticipated, identified and dealt with in a methodical manner.

Perhaps the only real substance in the mystical view is that often the demands of functionality force compromises on network security. Functionality is always involved in a dialectic with safety. The important thing, however, is to see security issues as problems not taboos and to work at them logically and methodically from the outset. The real danger in network security is to believe in the myths. Myths foster ignorance. Ignorance fosters mistakes.

## RECOMMENDED READING

Various authors. (1996) *Microsoft NT Server 4.0 Resource Kit*. Microsoft Press: Redmond, Washington.

Rutstein, C. (1997) *Windows NT Security: a practical guide to securing Windows NT servers and workstations*. McGraw-Hill: New York.

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# Future E-Mail of the Commission

The current E-Mail service of the Commission is called INSEM 2 (Inter-institutional Electronic Mail). The "2" indicates that INSEM 2 is already the second generation of E-Mail service at the Commission. INSEM 1 was even based on an in-house developed product.

INSEM 2 has provided the Commission with a quite reliable E-Mail backbone (fully conforming to the X.400 standard). Practically, it gave every official of the Commission access to a complete range of E-Mail functions including external connections to INTERNET mail (SMTP/MIME) and other X.400 based mail services as well as to Fax and Telex gateways. Currently around 20 000 users at the Commission exchange about 2 Million messages per month through INSEM 2. Also more than 30 applications use it to communicate with humans and other applications via an API (Application Programming Interface), e.g. the Question Parlementaire application. INSEM 2 is based on Route400 of the British company Net-tel. In addition, the Telecommunication Centre (TC) is using a product called Softswitch from Lotus/IBM.

Despite its success, INSEM 2 shows signs of ageing. For example, its user interface has not evolved to the same level as other office automation products, its 16 bit architecture prevents the desired level of integration with the NTP (Next technological platform) operating system platform and many of the ever more important Internet protocols are not yet supported.

E-Mail is not any more an isolated function with only a marginal integration with the rest of the office automation. E-Mail has become an integral part of a modern office automation suite with multiple links to other programs and tightly integrated functions. This is for example visible in calendaring and scheduling. Two isolated products require a duplication of work for administration, e.g. separate user accounts, and

cannot use the full potential of integrated functions, e.g. for notification of meetings outside specific workgroups.

The Commission has launched the project "Future E-Mail" in order to assure a timely evolution of its E-Mail service. This comprises the internal E-Mail service as well as the TC interfaces to external communication partners. The objectives of this evolution are manifold (the following list does not indicate an order of importance):

- A user interface well in line with the user interface conventions in the other office automation products in use at the Commission;
- Additional user functions to better support the practical working conditions at the Commission, e.g. manager-secretary co-operation and functional mailboxes;
- Even higher reliability and performance of the service visible in a still higher availability of the service and short message delivery delays;
- Advanced protocols and technical interfaces for a seamless integration into the office automation environment and the server operating system;
- Reduced central and local administration requirements of the E-Mail software and the E-Mail servers;
- Improved security against improper actions as well as security tools, such as encryption and digital signatures;
- Link of the E-Mail software and service with agenda functions in order to avoid duplication of administration and to profit from integrated functions;

- Usage of emerging groupware and workflow functions within E-Mail products and the link to document management systems;
- Link to Internet and Intranet technology in order to benefit from a combination with the E-Mail functions;
- E-Mail architecture adapted to advanced requirements, such as the support of roaming users, single log-in, link to delegation and member states offices.

The future E-Mail service of the Commission should be based on a well established market product which has given proof of its viability for large scale organisations and with the potential to offer a reliable evolution path for E-Mail for the years to come.

Because the E-Mail product and services market is divided between a number of important players, the IRMB of the Commission has decided to procure a new E-Mail system through an open public tender. There are currently contacts with other European Institutions in order to determine a potential participation in this public tender.

For the Commission, the scope of the public tender will not be limited to a product alone. It will cover services required to turn an E-Mail product into a working system for the Commission, such as:

- Assistance to the design of the future E-Mail service at the Commission;
- Preparation of the product and service;
- Piloting the future E-Mail service;
- Migration of users to the new system;
- Migration of applications;
- Operational services;
- Documentation;
- Training of users and technical personnel.

As E-Mail is a critical service for many Commission DGs, it will be essential to keep important elements of control and decision making with the Commission. Routine work, though, will be done by the contractor.

The Steering Committee Architecture Evolution (SCAE), a sub-committee of the CTI, which is supervising the project has accepted the following tentative time table:

- 1<sup>st</sup> half of 1998 for publication of the detailed public tender
- 2<sup>nd</sup> half of 1998 for selection of a supplier
- 1<sup>st</sup> half of 1999 for piloting the future system and service
- 2<sup>nd</sup> half of 1999 for start of the deployment in the DGs.

This timetable is tuned for a large scale deployment of the future E-Mail system after the full completion of the NTP migration in the Commission DGs.

Gunter SCHAEFER  
DI / STD

# API's for E-Mail applications

*The objective of this article is to describe the latest status of the INSEM2 application programming interfaces (APIs) and to provide guidelines for the migration of applications to a 32-bit environment in the NPT context.*

There are 2 sets of APIs supported in INSEM 2 to interface applications with Route 400: Simple MAPI (1.0) and CMC (1.0). A new one is expected for Windows platforms: Extended MAPI, which is a superset containing CMC and Simple MAPI.

## **The Simple MAPI interface:**

This interface is available for Windows applications.

Simple MAPI is a set of functions that applications use to create, manipulate, transfer and store messages. MAPI provides a common interface that application developers use to create mail-enabled and mail-aware applications independent of the underlying messaging system. MAPI is interfaced locally to the User Agent. It can be used to build custom messaging applications. Although designed to be called from C programs, the functions can be called with little parameter modification from application-specific scripting packages such as Visual Basic. Simple MAPI includes routines intended for use by applications, such as spreadsheet programs and word processors.

Messages, attachments and other objects in MAPI are principally composed of data called properties. Examples of properties include the subject line of a message, the name of a user, or the body of an attachment. An application can read, write, and modify the properties of an object.

Applications use the MAPILogon function for generating a MAPI session object. Clients make

MAPI calls and manage MAPI objects through a MAPI session object. Further MAPI function calls go through the session object to carry out operations such as: read a mail message, delete a message, send a message, resolve a name to an address book entry.

The MAPILogoff function ends the session with the messaging subsystem.

The current Net-Tel implementation of the Simple MAPI interface is a 16-bit DLL that replaces the mapi.dll of Microsoft which is installed by default with the operating system. Through this DLL the Route 400 UA application is piloted via DDE calls. Thus MAPI is very dependant of the Route 400 application, and it is not always possible to call the API non-interactively (without interaction with the Route 400 UA). The MAPI.DLL is installed with the Route 400 User Agent.

## **The CMC interface (16-bit):**

This interface is available on Windows and on different UNIX platforms (SCO ODT 3 and OSE 5, Digital Alpha, NCR 3450, Pyramid, Solaris and ICL DRS 6000).

The CMC (Common Messaging Call) API enables the sending, reading and deletion of messages, and the looking-up of addresses. CMC is a set of functions that allows a mail-enabled application to access to a messaging service. The messaging service (MTA) and the mail-enabled application can be located on separate machines; the link will then be done through a file sharing mechanism (NFS, LAN Manager...). Once the

application has completed a send call, all responsibility for the message is transferred to the CMC implementation. On the receiving side, all messages are delivered to a mailbox for a user. With the CMC API, the application can retrieve summaries of the contents of a mailbox and read a particular message. The address book allows the mail-enabled application to look up information about users of the messaging service.

CMC function calls occur within the context of a session. Before each task, the mail-enabled application must first establish a session with the messaging service through the `cmc_logon()` function, and after the task, the closure of the session is accomplished by the mail-enabled application through the `cmc_logoff()` function.

An application submits a message to the submission queue through a `cmc_send()` function. The mail-enabled application is responsible for populating the CMC message structure used in the `cmc_send()` function. To retrieve a message, the mail-enabled application can retrieve a summary of mailbox information through the `cmc_list()` function. Individual messages can then be retrieved through the `cmc_read()` function. `cmc_act_on()` allows the user to act on a message in the mailbox (e.g. delete it). To look-up names in the address book, the application uses `cmc_look_up()` to translate a user-friendly name into a messaging address.

On Windows the CMC implementation is independent from the Route 400 User Agent.

The CMC API is provided as a C library (On Windows as a 16-bit static link library, and on Unix either as an archive library or a shared library depending on the platform).

CMC is a low level interface. To use it, one needs to be familiar with C programming and C structures manipulation. To make its usage easier for Windows application programmers, an OLE server was created by the DI with the CMC library. This OLE server provides an easy access to some basic functions of the library (Sending

mail and Address Book lookup only), it is available for application programmers, and once it is integrated into an application, it becomes part of this application.

### **The CMC interface (32-bit):**

A second implementation of CMC is available on Windows 32-bit systems (Win95 & WinNT), it uses the P7 protocol. P7 is a standard X400 protocol used between the Route 400 RUA and the MTA. This protocol is a Client/ Server protocol on TCP/IP, thus it is independent from any file sharing mechanism between the application and the MTA, and it provides a more secure access to the Message Store by password checking.

This implementation of the CMC API is provided as a 32-bit C library and a 32-bit DLL, and requires the installation of a P7 stack which will assure the communication with the Message Store process on the MTA.

A new OLE server built on the 32-bit CMC library will be available in September 1997 to give the same easy access to the Send and Lookup functions of the library. This OLE server is compatible with the one built on the 16-bit CMC library. Applications that use the 16-bit OLE server will not need many modifications in order to run with the new 32-bit OLE server, but one modification at least has to be made: because the new library gives a Client/Server access to the Message Store, a password must be given to the `cmc_logon()` function; a new function will be added to the OLE server for this purpose.

### **Usage on current 16-bit environment and recommendations for NTP**

Currently in the Commission's Windows 3.1 environments most applications are using CMC 16-bit. MAPI also is used in some applications, but because of its instability it is only used for very basic calls (`mapisenddocument`).

The CMC 16-bit interface can still run on 32-bit platform provided that file sharing is insured (NFS client on station or VisionFS on server). However the best choice for the moment for 32-bit platforms is the CMC 32-bit which will permit to build real client-server applications.

Once a complete working Extended MAPI solution will be available, it will be the recommended solution to build applications (Extended MAPI is a superset containing CMC and Simple MAPI).

Integration of the MAPI and CMC APIs in applications is the responsibility of the DG supporting the application.

C. MARCHAL  
DI / STD

## DIRECTION INFORMATIQUE

Directeur Général	C. FLESCH (*)
Directeur	F. de ESTEBAN
Conseiller	P. MARCELLI
Assistant	J.L. SION

Gestion des ressources internes M. O'LEARY

### COORDINATION DES ORGANISATIONS LOCALES

1. Relations utilisateurs et cohérence informatique - Chef de secteur "Relations Utilisateurs"	D. KÖNIG J. LAVADO
2. Coordination des ressources humaines et budgétaires (schémas directeurs)	P. BERTRAND

### SERVICES OPERATIONNELS

3. Support des systèmes d'information Chef adjoint d'unité	D. DEASY -----
4. Support logistique et formation Chef adjoint d'unité	W. BAROSCH 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

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(\*) Egalement responsable du Service de Traduction

## ORGANISATIONS LOCALES

DG	IRM Information Resources 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	DEWAEEL 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.	



<i>DG</i>	<i>IRM Information Ressources Manager</i>	<i>Position de l'informatique dans l'organigramme</i>	<i>SA System Administration</i>	<i>SU Support Utilisateurs</i>	<i>DV Développement</i>	<i>ISO Informatics Security Officer</i>	<i>Corresp. Inform. O/N</i>
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	RUYS P.	RUYS P.	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	VERLEYSEN P.	unité rattachée au Dir. Gén.	BASTIEN C.	SCATOZZA G. VOLLMER J.	LOGNONE B. DEBART F.	VERLEYSEN 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	SOETEWEEY E.	rattachée à l'Assistant	DELSINNE D		TOLVASEN S.	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.	TOSETTI A.	CRELOT J.	O

## Budget Informatique sur le Titre A5 & Article A-430

<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	3.369
VII	688
VIII	1.715
IX	6.090
X Siège	1.381
X Bureaux	1.393
XI	1.028
XII	70
XIII/BXL	868
XIII/LUX	395
XIV	513
XV	848
XVI	224
XVII/BXL	633
XVII/LUX	896
XIX	4.615
XX	984
XXI	1.287
XXII	460
XXIII	744
XXIV	1.030
SG	3.187
SJ	405
SPP	372
OSCE	3.598
AAE	64
DI	942
BS	184
SCIC	1.405
SDT	3.164
CDP	126
IGS	99
ECHO	562
Dépenses communes	14 560
<b>TOTAL DG</b>	<b>68.273</b>
Management	175
Support des Systèmes d'Information	1 625
Support Logistique et Formation	690
Support Technique et Bureautique	3 052
Support Transmissions des Données	9.715
Centre de Calcul	14 600
Sécurité informatique	132
<b>TOTAL Services Centraux</b>	<b>29.989</b>
Agence Européenne de Coopération (AEC)	83
Réserve pour imprévus	132
<b>TOTAL</b>	<b>98.478</b>

## 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	650								
ECHO	133						0,1		,1
Totaux	21266	265,5		68,6		132,6	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 DGs 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

**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		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	1079			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	38,9	43,9
V/Lux	142				1,5	1		1	1,9	1			3	3,4	6,4
VI	1144	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	1756	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	1056	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	1217	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 (7)	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	1990	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	650	1		2,5	3	1		,5	2	3			8	5	13
ECHO	133	,5	,5	,5	3	1	1		1,1			1	3	5,6	8,6
Totaux	21468	48,6	14,8	151,8	216,8	99,1	38,5	116,6	103,7	140,7	2,2	14,9	571,5	376,0	947,6

## REMARQUES et CONVENTIONS

- Sont répertoriés ici le personnel statutaire et les externes intra-muros en régie.
- Les chiffres des DGs 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 DGs.
- 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 24-9-97)

Nom	Objet	Chef de projet	Programme/ Responsable	Planification		
				Phase active (2)	Fin de la phase active	Mise en service (3)
<b>INSEM2</b>	INTERINSTITUTIONAL ELECTRONIC MAIL-2 Amélioration de la qualité Outils d'encryptage E-mail pour projet NPT Central Management Station Future E-Mail /Coordination with DG's Future E-Mail /Appel d'offre	SCHÄFER	DI/IDA	FS CO CO CO FS	3/97 3/97 2/97 6/97 10/97 6/98	12/97 12/97 4/97 12/97
<b>EUROPA</b> <b>EUROPA</b> <b>EUROPA PLUS</b> <b>EUROPA TEAM (4)</b> <b>CAA-V2</b>	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
<b>ADONIS</b> v 3.1.h Adonis/image Adonis 5	ADMINISTRATION DES DOCUMENTS Corrections, améliorations, sécurité scannérisation, visualisation des documents Dossiers, intégration, courrier électronique, EUROLOOK	J.F. BLEROT	DI	OP RI PA	12/97 12/97	7/97
<b>SICMOB/ELS</b>	GESTION DES BIENS MOBILIERS V1.11	J.F. BLEROT	DI	OP RI		2/97 10/97
<b>TCENTER</b> FTS	CENTRE DE TELECOMMUNICATIONS New Fax/ Telex Server	AGUDO	IDA	RI	9/97	10/97
<b>DIR</b>	DIRECTORIES Annuaire interinstitutionnel Annuaire interinstitutionnel	SCHÄFER	IDA	FS CO	3/97 5/97	5/97 12/97
<b>SNET</b> Step 0 Step 1 Step 2 Step 3	SUPER/SEAMLESS NETWORK Introduction of 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 1998 1997 1997	1997 1998 1997 1998
<b>EURO</b>	INTRODUCTION DE L'EURO	TOSSOUNIDIS	DI			
<b>GROUPWARE</b>	GROUPWARE/WORKGROUP COMPUTING Projets Pilotes	TOSSOUNIDIS	DI	FS	6/96	
<b>NTP</b>	NEXT TECHNOLOGICAL PLATFORM Definition plate-forme cliente Déploiement NTP	GARCIA MORAN  BENALI PUIG SAQUES	DI	CO CO	7/97 9/96	1997 1997/98
<b>CD-ROM</b>	INTEGRATION CD-ROM DANS L'ENV, BUREAUT,	GARCIA MORAN FRASER	DI	OP		1996
<b>EUROFORMS</b>	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]
<b>UTILISATEURS INTERNES (19000)</b>					
<u>PROGRAMME GENERAL</u>					
• Cours à l'entrée en service					
- L'informatique à la Commission (cours à l'entrée 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					
- Prise en main de la Next Technological Platform	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	
- Quoi de neuf dans EXCEL'97 ?	P	0,5	KUSTERMANS	Externe	
• Base de données personnelles					
- MS-ACCESS Initial	P	2,	LIMBOS	Externe	
- MS-ACCESS Perfectionnement	P	2,	LIMBOS	Externe	
- Quoi de neuf dans ACCESS'97 ?	P	0,5	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	
- Quoi de neuf dans POWERPOINT'97 ?	P	0,5	KUSTERMANS	Externe	
• Agenda électronique					
- CALANDAR Initial	P	0,5	ROSEY	Externe	
- CALANDAR Perfectionnement	P	0,5	ROSEY	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	
• 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	

PROGRAMMES DE FORMATION INFORMATIQUE					
POPULATIONS/ .Sujets	Méth.	Dur.	Resp. de sujet	Instructeurs	Stat. [1]
<b>SYSTEMES D'INFORMATION (suite)</b>					
• 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)	
<b>UTILISATEURS EXTERNES (3000)</b>					
• 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)	
<b>GESTIONNAIRES DES SYSTEMES D'INFORMATION OPERATIONNELS (200)</b> [2]					
• SIC (Systèmes d'Information Communs)					
- SIC-Administration & sécurité	P	0,5	MAIN	Externe	
<b>ENCADREMENT UTILISATEURS (900)</b> [2]					
• Guidelines for project management	C	0,5	GROEMER	GROEMER	A.09
<b>PERSONNEL INFORMATICIEN (400)</b> [3]					
<b>PROGRAMME COMMUN</b>					
• Accueil des nouveaux informaticiens					A 09
- 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)	
<b>SUPPORT DES UTILISATEURS</b>					
• Support des produits					A 09
- 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	
- Windows NT/95 pour moniteurs et monitrices	P	2,			
- Windows NT/95 pour <i>personnel informatiten</i>	P	2,			
- Installing and Supporting Office'97	P	2,			
- Supporting Word'97 pour moniteurs et monitrices	P	3,			
- Supporting Excel'97 pour moniteurs et monitrices	P	3,			
• Gestion du poste de travail					
- PC2000	A	4,	BROUSMICHE	CBT package	
- Gestion des imprimantes	P	2,	BRANTS	Externe	
<b>ADMINISTRATION SYSTEME</b>					
• NT					A 09
- Windows NT accelerated	P	5,	GRITSCH	Externe	
- TCP/IP and Domain Modeling	P	2,	GRITSCH	Externe	
• WINDOWS'95					
- Supporting Windows'95	P	4,	GRITSCH	Externe	
• OFFICE'97					
- Supporting Word'97 pour LSA	P	3,	GRITSCH	Externe	
- Supporting Excel'97 pour LSA	P	3,	GRITSCH	Externe	
• 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]
<b>ADMINISTRATION SYSTEME (suite)</b>					A 09
- Administration système SCO-Unix / ODT	P	2,	DEBACKER	Externe	
- 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,	SCHAEFFER	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	
<b>DEVELOPPEMENT ET MAINTENANCE DES SI</b>					A 09
• Context, guidelines and methods					
- 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	06/96
- 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]
<b>DEVELOPPEMENT ET MAINTENANCE (suite)</b>					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-Designor	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	
. - Developer 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)					
. Windows NT Security Advanced	C	1,	BREMAUD	Externe	A.09
. Responsabilités et tâches des LISO	C	1,	BREMAUD	(BS)	
. 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	CONVENTION : méthodes A : Autoformation C : Cours / Conférence P : cours Pratique
[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.	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 <b>SERVERS and SERVER OPERATING SYSTEMS</b>			Product family managers		
Product <b>LOCAL SERVERS and OPERATING SYSTEMS</b>			H. WAGNER	DG-XVII-L	
			J.P. LAMBOT	DI-STB	
Product name	CPU Model	Operating System	Cl	Stat	Comments
BULL DPX 2/3x0	Motorola 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/Windows NT	B	OP	
DEC 5x00	MIPS R3000	ULTRIX V.4	B	AD	
DEC AlphaStation 3000	DEC AXP	Digital Unix	B	OP	
DEC AlphaServer1xxx / 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	AD AD	
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	OP	
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 <b>SERVERS and SERVER OPERATING SYSTEMS</b>			Product family managers		
Product <b>LOCAL SERVERS and OPERATING SYSTEMS</b>			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 <b>SERVERS and SERVER OPERATING SYSTEMS</b>			Product family managers		
Product <b>CENTRAL SERVERS and OPERATING SYSTEMS</b>			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 <b>WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS</b>					Product family managers H. DE SADELEER (f.f) DG XIII F. GARCIA MORAN ff DI-STB	
Product <b>WORKSTATIONS</b>						
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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	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:

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

NA = Equipement à acheter  
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<sup>(1)</sup>Statut AD à condition que les configurations soient dans leur état de départ

Product family <b>WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS</b>				Product family managers H DE SADELEER (f.f.) DG XIII F. GARCIA MORAN ff DI-STB
Product <b>CLIENT OPERATING SYSTEMS</b>				
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 <b>WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS</b>				Product family managers H. DE SADELEER (f.f.) DG XIII F. GARCIA MORAN ff DI-STB
Product <b>LAN INTEGRATION PRODUCTS</b>				
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 <b>WORKSTATIONS and CLIENT OPERATING SYSTEMS, LAN INTEGRATION PRODUCTS and EMULATORS</b>				Product family managers H. DE SADELEER (f.f.) DG XIII F. GARCIA MORAN ff DI-STB	
Product <b>EMULATORS</b>					
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 <b>PRINTERS/PLOTTERS/SCANNERS and OFFICE EQUIPMENTS (fax, photocopier, ..)</b>					Product family managers T. CUNNINGHAM DG 11 J. LOCQUET DI-SLF	
Product <b>PRINTERS / PLOTTERS / SCANNERS</b>						
Interface, protocol, standard, etc.	CI	TS	AS	Environments	Comments	
ADOBE POSTSCRIPT	A	OP				
HP-PCL 3	A	OP				
HP-PCL 4	A	OP				
HP-PCL 5	A	OP				
Product name	CI	Stat		Environments	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 <b>PRINTERS/PLOTTERS/SCANNERS and OFFICE EQUIPMENTS (fax, photocopier, ..)</b>					Product family managers T. CUNNINGHAM DG 11 J. LOCQUET DI-SLF	
Product <b>PRINTERS / PLOTTERS / SCANNERS</b>						
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	

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NA = équipement à acheter

OP = équipement opérationnel

AD = équipement susceptible de radiation de l'inventaire

Product family <b>PRINTERS/PLOTTERS/SCANNERS and OFFICE EQUIPMENTS (fax, photocopier, ...)</b>				Product family managers T. CUNNINGHAM DG 11 J. LOCQUET DI-SLF	
Product <b>OFFICE EQUIPMENTS (fax, photocopier, ...)</b>					
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		
MINOLTA EP1050 / EP 1083	B	OP	Photocopier	0 - 5 Kcop/month 15 A4/m (1)	
AGFA X310	B	OP	Photocopier	5 - 20 Kcop/month 35 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)	
CANON CLC700	B	PO	Photocopier colour	4 - 8 Kcop/month; 5 A4/m (7)	
CANON CLC 1000	B	OP	Photocopier colour	5 - 50 Kcop/month; 31 A4/m	
MINOLTA CF 900	B	OP	Photocopier colour	< 5 Kcop/month 6 A4/m	
OCE 2600	B	OP	Photocopier	100 - 500 Kcop/month 100 A4/m (1)	
OCE 3165	B	EV	Photocopier multi-fonction	> 40 Kcop/month; 65 A4/m	
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 <b>SYSTEM MANAGEMENT PRODUCTS</b>				Product family managers	
Product <b>SYSTEM MANAGEMENT PRODUCTS</b>				P. HIRN	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 <b>LAN MANAGEMENT PRODUCTS</b>				Product family managers	
Product <b>LAN MANAGEMENT PRODUCTS</b>				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 <b>TELECOMMUNICATION SERVICES</b>				Product family managers A. RODRIGUEZ OSCE K. DE VRIENDT (f.f.) DI-STD	
Product <b>ELECTRONIC MAIL GATEWAY - PAX400</b>					
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 <b>TELECOMMUNICATION SERVICES</b>				Product family managers A. RODRIGUEZ OSCE K. DE VRIENDT (f.f.) DI-STD	
Product <b>FILE TRANSFER GATEWAY - FTRG</b>					
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 <b>TELECOMMUNICATION SERVICES</b>				Product family managers A. RODRIGUEZ OSCE K. DE VRIENDT (f.f.) DI-STD	
Product <b>INTERACTIV ACCESS GATEWAY - GWI</b>					
Interface, protocol, standard, etc.	Cl	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	Cl	Stat	Environments	Comments	
GWI		EV	Interactiv access to / from DG		

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

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

Product family <b>DESKTOP, WORKGROUP and WORKFLOW APPLICATIONS</b>				Product family managers P. VERLEYSEN SDT L. TOSSOUNIDIS DI-STD	
Product <b>DESKTOP APPLICATIONS</b>					
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 <b>DESKTOP, WORKGROUP and WORKFLOW APPLICATIONS</b>				Product family managers P. VERLEYSEN SDT L. TOSSOUNIDIS DI-STD	
Product <b>WORKGROUP and WORKFLOW APPLICATIONS</b>					
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 <b>DATA BASE MANAGEMENT SYSTEMS and DEVELOPMENT TOOLS</b>				Product family managers A. DE BACKER DG XII J. MARIN DI-STB	
Product <b>DATA BASE MANAGEMENT SYSTEM</b>					
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	
<b>Data Base Management Systems</b>					
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	
<b>Connectivity tools</b>					
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 <b>DATA BASE MANAGEMENT SYSTEMS and DEVELOPMENT TOOLS</b>				Product family managers A. DE BACKER DG XII J. MARIN DI-STB	
Product <b>DEVELOPMENT TOOLS</b>					
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	
<b>Libraries and APIs</b>					
ODBC 2	B	OP	MS WINDOWS		
ODBC 3	B	EV	Win 3 1, Win 95, Win NT		
<b>3rd Generation Languages</b>					
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		
FORTTRAN 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
<b>4th Generation Environment</b>					
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		
<b>Case tools</b>					
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	
<b>Testing tools</b>					
Win Runner	C	OP	WIN NT, Win 95	training on demand	
<b>Configuration management tools</b>					
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 <b>INFORMATION SYSTEM INFRASTRUCTURE SOFTWARE and PACKAGES</b>				Product family managers
Product <b>INFORMATION SYSTEM INFRASTRUCTURE SOFTWARE and PACKAGES</b>				
Product name	Cl	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 <b>DOCUMENT STORAGE, RETRIEVAL and HANDLING SYSTEMS</b>				Product family managers F. CRUCKE            DG X H.-G. KOHL        DI-SSI	
Product <b>DOCUMENT HANDLING SYSTEMS</b>					
Product name	Cl	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 <b>DISSEMINATION PACKAGES and TP-MONITORS</b>				Product family managers D. MAC CANN        SPP P. DE CONINCK     DI-CC	
Product <b>DISSEMINATION PACKAGES</b>					
Product name	Cl	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 <b>INTERNET and INTRANET TOOLS</b>				Product family managers F. CRUCKE DG X P. DE CONINCK DI-CC	
Product <b>BROWSERS</b>					
Product name	CI	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 <b>INTERNET and INTRANET TOOLS</b>				Product family managers F. CRUCKE DG X P. DE CONINCK DI-CC	
Product <b>HTML editors</b>					
Interface, protocol, standard, etc.	CI	Stat	Environments	Comments	
HTML 3.2	B	OP			
Product name	CI	Stat	Environments	Comments	
HoTMetal PRO 3.0	B	OP	MS WINDOWS		
INTERNET ASSISTANT	B	PO	Word for WINDOWS		

Product family <b>PROJECT MANAGEMENT TOOLS, EXECUTIVE INFORMATION SYSTEMS, DATA ANALYSIS and MODELLING SYSTEMS</b>				Product family managers J.-P. BUISSERET DG XIX T. GRÖMER DI-SSI	
Product <b>PROJECT MANAGEMENT TOOLS</b>					
Product name	CI	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 <b>PROJECT MANAGEMENT TOOLS, EXECUTIVE INFORMATION SYSTEMS, DATA ANALYSIS and MODELLING SYSTEMS</b>				Product family managers J.-P. BUISSERET DG XIX T. GRÖMER DI-SSI	
Product <b>DATA ANALYSIS &amp; MODELLING SYSTEMS</b>					
Product name	CI	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.	Cl	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	Cl	Stat	Environments	Comments	
<b>Version "sécurisé" de produits d'autres familles</b> (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			
<b>Analyse de risques</b> (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	
<b>Plan de secours</b> (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	
<b>Identification / Authentification renforcée</b>					
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	
<b>Contrôle d'accès</b>					
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 <b>SECURITY PRODUCTS</b>				Product family managers	
Product <b>SECURITY PRODUCTS</b>				----- G. BREMAUD                      BS	
Product name	CI	Stat	Environments	Comments	
<b>Journalisation, Monitoring, Alerte</b>					
Intruder Alert (AXENT TECHN.)	C	EV			
Brain Tree Security Software	C	EV			
<b>Audit systems: Système UNIX</b>					
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	
<b>Audit systems: Système Windows NT</b>					
Kane Security Analyst	B	EV	WINDOWS NT	Par BdS	
<b>Audit systems: Télécommunication UNIX et WINDOWS NT</b>					
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	
<b>Anti-virus</b>					
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	
<b>Filtrage</b>					
MIME Sweeper (REFLEX/INTEGRALIS)	B	EV	WINDOWS NT	Par DI/STD, BdS	
<b>Cryptographie</b>					
CryptWare Products (UTI MACO)	B	EV	MS DOS - WINDOWS 95 / NT	Par DI,DG 19, BdS(Sincom2,E-mail) Proposition OP	
<b>Certification</b>					
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, ,)	
<b>Firewalls</b>					
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	

<b>Product family SECURITY PRODUCTS</b>				<b>Product family managers</b>	
<b>Product SECURITY PRODUCTS</b>				----- G. BREMAUD                      BS	
<b>Interface, protocol, standard, etc.</b>	<b>Cl</b>	<b>Stat</b>	<b>Environments</b>	<b>Comments</b>	
<b>Single sign-on</b>					
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	
<b>Sécurité physique (anti-vol, ...)</b>					
Divers produits (SecuPlus)	C	EV		Par BdS	
Attach with cable (LOCK-IT)	C	EV	MS DOS	DG 8, BdS	
<b>Matériel</b>					
Cryptofax Philips	C	EV	Domaine Classifié	DG 1A Proposition OP	
Matériel Tempest	C	EV	Domaine Classifié		

<b>COOPERATION ENTRE LA DI ET LES DG/SERVICES</b>			
<b>COMITES/GROUPES</b>	<b>PRESIDENT(S)</b>	<b>RAPPORTEUR</b>	<b>DG PARTICIPANTES [1]</b>
<b>COMITES</b>			
Cellule de Pilotage des Schémas Directeurs	P BERTRAND (DI)	P BERTRAND (DI)	3,9,10,13/B,19,OSCE,SG
Comité Technique Informatique	C FLESCHE	M ALVES LAVADO (DI)	ouvert à toutes les DG
Comité de Suivi du Projet "Mesure de la Satisfacation des Utilisateurs"	M ALVES LAVADO (DI)	M ALVES LAVADO (DI)	24, SdT
Sous-comité du CTI "migration NTP"	G VERVAET (DG4)/M PUIG (DI)		ouvert à toutes les DG
Steering Committee Architecture Evolution	M KOENIG (DI)/R BOSMAN	M GARANT (DI)	1A,2,3,10,13/B,13/L,19,OSCE,SDT
Steering Committee Outils logistiques	-----	M TOSETTI/BLEROT	3,9,20
User Committee Adonis	M DEASY (DI)	M. BLEROT (DI)	ouvert à toutes les DG
User Committee outils logistiques	P BERTRAND (DI)	M BLEROT (DI)	ouvert à toutes les DG
User Committee Sei-Leg	M FANALS (SG)/LEONARD(DI)	M FANALS (SG)/LEONARD(DI)	ouvert à toutes les DG
<b>GROUPES</b>			
<u>Suite au Séminaire du 30.09.96</u>			
Groupe Schéma Directeur	P BERTRAND/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)	P 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
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	J P WEIDERT / F CRUCKE	J P. WEIDERT / F CRUCKE	3,5,19,SCIC,SDT
Nouveau cadre contractuel			
Groupe Appels d'offres pour Serveurs Windows NT	resp J.P. LAMBOT (DI)		3,10,13,19,OSCE,SDT
Groupe Appels d'offres PC	resp M THONON (DI)		2,13,19,SDT
Groupe Appels d'offres de sous-traitance commune			
Etudes et développements et maintenance	resp J LEONARD (DI)	C WITTWEHR	3,9,10,13L,17,OSCE
Groupe de travail formation informatique	resp. M 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 R BECKER (DI)		3,SDT
Project management	M C PEARE (DG 06)	M. T GROEMER (DI)	4,612,18,19,21,SG
Ressources et procédures	P BERTRAND/ A CABALLERRO	P BERTRAND/ A CABALLERRO	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 D DEASY (DI)	J LEONARD (DI)	9,19,SG
Year 2000 and Euro	C PEARE (DG 6) / W HEYER	C PEARE (DG 6) / W HEYER	ouvert à toutes les DG

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

# Calendrier

35/97

concernant la coopération entre la DI et les DG / SERVICES

07.10.97

## COMITES

(1)	08.10.97	12H00-14H00	IMCO 5/	Cellule de Pilotage des Schémas Directeurs
	08.10.97	11H00-13H00	VID BREY	Comité de Coordination pour la Standardisation
	14.10.97	11H00-13H00	VID BREY	Steering Committee Architecture Evolution
(1)	20.10.97	16H00-18H00	VID BREY	Cellule de Pilotage des Schémas Directeurs
(1)	29.10.97	14H30-17H00	CCAB	Sous-Comité CTI "Migration NTP"
(1)	03.11.97	15H00-18H00	VID BREY	Cellule de Pilotage des Schémas Directeurs
(2)	05.11.97	10H30-17H00	BRUX	Comité Technique Informatique
	12.11.97	11H00-13H00	VID BREY	Comité de Coordination pour la Standardisation
(1)	17.11.97	16H30-18H00	VID BREY	Cellule de Pilotage des Schémas Directeurs
(1)	01.12.97	15H00-18H00	VID BREY	Cellule de Pilotage des Schémas Directeurs
	10.12.97	10H30-17H00	BRUX	Comité Technique Informatique
(1)	15.12.97	16H30-18H00	VID BREY	Cellule de Pilotage des Schémas Directeurs

## GROUPE

	08.10.97	10H00-13H00	IMCO 5/21	SNET
	15.10.97	15H00-	JECL 7/1A	Year 2000 and EURO
	16.10.97	11H00-12H00	VID BEAU	Groupe D: Améliorer le fonctionnement de l'organisation de l'informatique
(1)	16.10.97	12H00-13H00	VID BEAU	Groupe C + Groupe D
	12.11.97	10H00-13H00	IMCO 5/21	SNET
	10.12.97	10H00-13H00	IMCO 5/21	SNET

## PRESENTATIONS/DEMONSTRATIONS/SEMINAIRES/WORKSHOPS/COURS/AUTRES

(4)	08.10.97	annulée	JECL 7/1A	Workshop "SURVEY 2.6"
(3)	08.10.97	10H30-13H00	WAG C4	Workshop Sous-traitance commune: Développement et maintenance des systèmes d'information
(3)	09.10.97	14H00-16H30	JECL 7/1A	Workshop Sous-traitance commune: Développement et maintenance des systèmes d'information
	21.10.97	15H00-17H30	JECL 7/1A+1B	Workshop SEI-LEG
	12.11.97	14H00-17H30	CCAB	Multivendeurs : "Presentation of the IT architecture of the Commission (June 97)"
(1)	20.11.97	10H00-17H00	JECL 7/1A+1B	La solution ISM Access Master pour l'interconnexion extérieur / intérieur : par BULL

(1) Nouvelle action

(2) Changement de date : réunion reportée du 29.10.97 au 5.11.97 à BRUXELLES

(3) Mise en place du nouveau cadre contractuel - participation limitée à 2 personnes par DG

(4) Nouvelle date à préciser dès que possible









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**Contributions:** à envoyer à F. ROSSA JMO C2/82  
X400: G=Francois; S=ROSSA; O=DI; A=RTT; P=CEC; C=BE  
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