V

(Announcements)

## ADMINISTRATIVE PROCEDURES

## EUROPEAN PERSONNEL SELECTION OFFICE (EPSO)

## NOTICE OF OPEN COMPETITION EPSO/AST/41/07

(2007/C 836 A/01)

The European Personnel Selection Office (EPSO) is organising the following admission tests and open competition, based on tests, to constitute a reserve from which to recruit

## ASSISTANTS (\*) (AST3)

## IN THE FIELD OF INFORMATION AND COMMUNICATION TECHNOLOGY (IT)

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<sup>(\*)</sup> The European Union institutions apply a policy of equal opportunities and accept applications without distinction on the grounds of sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation.

#### I. ADMISSION TESTS

A. ELIGIBILITY CRITERIA (conditions to be met by the closing date for registration: 12 September 2007)

On the closing date for online registration (12 September 2007) the appointing authority will admit you to the admission tests if your online registration shows that you meet the following requirements:

#### 1. Qualifications

You must:

 have a level of post-secondary education attested by a diploma in the field of information and communication technology (IT)

or

(ii) have a level of general or vocational secondary education attested by a diploma giving access to post-secondary education and followed by appropriate professional experience of at least three years.

NB: The minimum of three years' professional experience required under I.A.1(ii) above counts as an integral part of the above qualification and cannot be included in the professional experience required under I.A.2 below.

### 2. Professional experience

You must have acquired at least three years' relevant professional experience:

— since obtaining the qualification required under 1(i) above

or

— since obtaining the qualification and professional experience required under 1.(ii) above.

#### 3. Knowledge of languages

You must have:

#### — main language (language 1)

a thorough knowledge of one of the official languages of the European Union;

and

## second language (language 2 — must be different from your main language)

a satisfactory knowledge of English, French or German.

When registering online (¹), you must specify your choice of second language (English, French or German); this will be the language in which you take the admission tests and the competition tests. This choice may not be changed after the deadline for online registration (12 September 2007).

<sup>(1)</sup> For practical reasons the registration form is available in English, French and German only.

To ensure that all general texts relating to the competition and all communication between candidates and EPSO are clearly understood on both sides, only English, French or German will be used for the invitations to the various tests and correspondence between candidates and EPSO.

The language you choose as your second language will be the language used for communicating with you.

You may send any questions to EPSO by e-mail (EPSO-AST-41-07@ec.europa.eu), but please check first that the information you want is not in the competition notice or the Guide for Applicants or on the EPSO website (http://europa.eu.int/epso).

#### 4. General conditions

You must:

- be a citizen of a Member State of the European Union,
- enjoy full rights as a citizen,
- have fulfilled any military service obligations imposed on you by law,
- meet the character requirements for the duties involved.

#### B. TEST PROCEDURES

EPSO will organise computer-based admission tests for all the candidates who meet the conditions set out in I.A. The tests will be held in the European Union in one or more centres specialised in this type of test, depending on their availability.

You will be informed of the procedure for attending these tests via your EPSO profile.

You will take the admission tests in English, French or German (language 2).

(a) A test comprising a series of multiple-choice questions to assess your knowledge of the European Union, its institutions and its policies.

This test will be marked out of 10.

(b) A test comprising a series of multiple-choice questions to assess your general ability, in particular your verbal and numerical reasoning skills.

This test will be marked out of 20.

Pass mark for tests (a) and (b) combined: 15.

Wrong answers in these tests will not be penalised.

The candidates with the 735 highest aggregate marks (2) in the admission tests and a pass mark for tests (a) and (b) combined will be invited to submit a full application for admission to the open competition. Once the selection board has examined these applications, candidates who meet all the eligibility criteria will be invited to the written tests.

<sup>(2)</sup> Where a number of candidates tie for the last available place, they will all be admitted to the next stage of the competition.

#### II. OPEN COMPETITION

# A. DUTIES AND ELIGIBILITY (conditions to be met by the closing date for registration: 12 September 2007)

Open competition EPSO/AST/41/07 is being held to recruit Assistants (AST3) in the field of information and communication technology (IT).

The purpose of this competition is to draw up a reserve list from which to fill vacant posts in the institutions of the European Union.

#### Number of successful candidates: 325

## 1. Nature of duties

The officials to be recruited will work in one or more of the following areas:

- 1. Operation/management of data processing centres
- Development of information systems (multi-level or web-oriented client/server systems) and web development and administration
- 3. Maintenance and administration of the user environment
- 4. Definition of solutions, deployment, management and supervision of e-mail services, data and voice network services, and telecommunications services in general
- 5. IT security management
- 6. Development and maintenance of software for statistical data collection, processing and dissemination
- 7. Security audit of information systems.

Besides the technical aspects relating to these different fields, the essential aspects of the duties will be:

- organising and/or monitoring projects in any of these areas (with or without outsourcing of some of the work);
- organising, introducing and/or monitoring operational services in any of these areas (with or without outsourcing of some of the work).

These duties will require you to liaise frequently with the various departments of the European institutions and outside contractors, and to perform various tasks relating to drafting reports and presenting the results of work/work plans to specialist and non-specialist audiences.

Knowledge and skills required:

Required are skills/experience in managing operational services and skills in drafting documents or operational manuals.

#### Systems

— Operating systems: systems administration and configuration (the operating systems currently in use within the European institutions are Windows NT/XP/2000/2003®, Unix®, Linux®, MAC OS X™, Lotus Notes™ and Novell™)

and/or

El	Official Journal of the European Union
_	Information systems security, in particular for security architectures, TCP/IP networks (routers, firewalls, Network Management Systems, IDS), operating systems (MS Windows 2000/XP Server, Unix/Linux), databases (MS SQL, Oracle)
	and/or
_	Telephony (fixed and mobile) and its integration with data networks
	and/or
_	Electronic messaging systems
Development	
_	Database systems (the main database management systems used by the European institutions are Oracle®, MS SQL Server®, PostgreSQL and MySQL)
	and/or
_	Design and/or maintenance of statistical databases
	and/or
_	Programming and use of statistical software, e.g., SAS, SPSS, STATA, etc.
	and/or
_	Programming numerical analysis methods
	and/or
_	Specifying, visualising, constructing and documenting the artefacts of software systems, e.g., UML
	and/or
_	Design and optimisation of Web pages and portals related to dissemination, including particular issues: security, system monitoring, performance optimisation and Web services
Networks	
_	Networks and telecommunications, in particular Internet technologies
	and/or
_	Television and teledistribution technologies, satellites
	and/or
_	Videoconferencing, streaming and multimedia in general
Support	
_	Office tools (the main tools used are MS Office™ and Exchange/Outlook®) and OpenOffice™

- Call centres
- Methodology
  - Service management.

The tests will, however, focus more on the ability to work in a fast-evolving IT environment than on an in-depth knowledge of particular products.

The specific knowledge and skills in the various areas indicated above and the technical specifications for the institutions' IT environment are set out in Annex 2 to this notice.

The European Union institutions place particular importance on the ability of applicants to grasp problems of all kinds, often complex in nature, to react rapidly to changing circumstances and to communicate effectively. You will have to show initiative and imagination and be highly motivated. You should be able to work frequently under pressure, both on your own and in a team, and adjust to a multicultural working environment. You will also be expected to develop your professional skills throughout your career.

#### 2. General conditions

The appointing authority will draw up a list of the candidates who meet the conditions set out at I.A.4 above and send it to the chair of the selection board together with their application files. The competition notice does not set any age limit, but please note the information under IV.7.

## 3. Special conditions

The selection board will admit to the written tests the candidates with the highest marks (2) and a pass mark in the admission tests (a) and (b) combined, and provided that you meet the following criteria:

(a) Qualifications

You must:

(i) have a level of post-secondary education attested by a diploma in the field of information and communication technology (IT)

or

 (ii) have a level of general or vocational secondary education attested by a diploma giving access to post-secondary education and followed by appropriate professional experience of at least three years.

NB: The minimum of **three years'** professional experience required under (ii) above counts as an integral part of the above qualification and cannot be included in the professional experience required under (b) below.

The selection board will allow for differences between education systems. For examples of the minimum qualifications required, see the tables annexed to the Guide for Applicants (http://europa.eu.int/epso/on-line-applications/guide\_version070710\_en.pdf) for each category. Note that these are examples only — stricter requirements may be set in the competition notice.

(b) Professional experience

You must have acquired at least three years' relevant professional experience:

since obtaining the qualification required under (a)(i)

or

- since obtaining the qualification and professional experience required under (a)(ii).
- (c) Languages

You must have:

## — main language (language 1)

a thorough knowledge of one of the official languages of the European Union;

and

second language (language 2 — must be different from your main language)

a satisfactory knowledge of English, French or German.

#### B. TEST PROCEDURES

## Written tests — marking

You will take written tests (a) and (b) in English, French or German (language 2).

(a) A test comprising two series of multiple-choice questions, one to assess your general knowledge relating to the duties in question and the other to assess your specific knowledge in a field of your choice relating to those duties.

This test will be marked out of 40 (pass mark: 20).

Time allowed (approximate indication): 1 hour.

The selection board will correct written tests (b) and (c) of the candidates with the 490 highest aggregate marks (2) (and a pass mark) in test (a).

- (b) A test on a subject of your choice in the field concerned, to assess:
  - your knowledge;
  - your ability to understand, analyse and summarise; and
  - your drafting ability.

This test will be marked out of 40 (pass mark: 20).

Time allowed (approximate indication): 2 hours.

(c) Drafting a brief memo in your main language (language 1) setting out the arguments and conclusions of written test (b). This test is intended to assess your command of your main language in terms of both drafting and presentation.

This test will be marked out of 10 (pass mark: 8).

Time allowed (approximate indication): 30 minutes.

These written tests will be held simultaneously at one or more centres in the European Union The date of the written tests scheduled by EPSO cannot be changed at your request. You will be notified of this date when you receive your invitation to the tests (via your EPSO profile).

#### 2. Oral test — marking

Once the written tests have been marked, the selection board will invite to the oral test the candidates with the 390 highest aggregate marks (2) in the written tests (a), (b) and (c) combined and a pass mark in each.

- (d) Interview with the selection board in English, French or German (language 2), to enable it to complete its assessment of:
  - your suitability to perform the duties described at II.A.I. above,
  - your specialist knowledge in the field concerned;
  - your knowledge of the European Union, its institutions and its policies,
  - your motivation and your ability to adjust to working as a European civil servant in a multicultural environment.

Your knowledge of your main language (language 1) will also be examined.

This test will be marked out of 50 (pass mark: 25).

The oral test will normally be held in Brussels.

## 3. Reserve list

The selection board will place on the reserve list the names of the candidates with the 325 highest aggregate marks (2) in the written and oral tests combined and a pass mark in each.

The list will be drawn up by merit group (maximum of four groups) and the names of the successful candidates will be given in alphabetical order within each group.

The reserve list and its expiry date will be published (3) in the Official Journal of the European Union and on the EPSO website (http://europa.eu/epso).

<sup>(3)</sup> Successful candidates may explicitly request that their names not be published. Requests must reach EPSO no later than two weeks after candidates are notified of the results.

#### III. HOW TO APPLY

Please also consult the Guide for Applicants (http://europa.eu/epso/on-line-applications/guide\_version070710\_en.pdf), which can be found on the EPSO website (http://europa.eu/epso). It contains detailed instructions to help you submit your application correctly.

The closing date for online registration is **12 September 2007**, with a deadline of 12.00 Brussels time on that day.

#### 1. Creating an EPSO profile/online registration

Before registering, you should carefully check whether you meet all the eligibility criteria (Sections I and II).

If you want to apply, you must register via the Internet by going to the EPSO website and following the instructions there concerning the various stages of the procedure.

It is your responsibility to complete your online registration in time. We strongly advise you not to wait until the last few days before applying, since heavy Internet traffic or a problem with the Internet connection could lead to the online registration being terminated before you complete it, thereby obliging you to repeat the whole process. Once the deadline has passed, you will not be able to register.

On completion of your online registration, you will receive on screen a registration number which you must note — this will be your reference number in all matters concerning your application. Once you receive this number, the registration process is finished — it is the confirmation that we have registered the data you entered.

If you do not receive a number, your application has not been registered!

Please note that you must have an e-mail address. This will be used to identify you. The information you must enter in your registration includes your choice of languages and details of the qualifications required for admission to the competition (qualification, name of issuing establishment and date obtained).

No documents are required at this stage. Candidates will subsequently be invited to send a full application (see Section III.3).

Once you have registered online, you can follow the progress of the competition by going to the EPSO website (http://europa.eu/epso) and clicking on 'Ongoing competitions'.

If you have a disability that prevents you from registering online, you may request — **preferably by fax** — a paper version of the form, (4) which you should fill in, sign and return by registered mail, postmarked no later than the closing date for registration. All subsequent communication between EPSO and you will be by post.

You must enclose with your application form a certificate attesting your disability, issued by a recognised body. You should also set out on a separate sheet of paper any special arrangements you think are needed to make it easier for you to take part in the different tests.

#### 2. Invitations

Details of when and where to attend the admission tests and other tests will be available **only** on the EPSO website (http://europa.eu/epso). You can access this information by entering the user name and password you specified when registering online. You are responsible for updating your EPSO profile to reflect any change in your postal or email address.

<sup>(4)</sup> Write to: EPSO — Info-recruitment, Avenue de Cortenbergh 80 — 4/11, B-1049 Brussels; fax: (32-2) 295 74 88.

You are also responsible for consulting your EPSO profile to keep track of the progress of the competition and to check the information relevant to your application at every stage. If you find that you cannot do this, you must notify EPSO immediately by e-mail (EPSO-AST-41-07@ec.europa.eu).

Wherever possible, you will be asked to sit the admission tests in the city you chose when registering online. For organisational reasons you will not be able to switch to another venue unless you can prove that you have changed residence and unless you have informed EPSO of this no later than three weeks before the planned date of the admission tests.

## 3. Full application

The candidates with the highest marks in the admission tests, as specified in Section I.B, will be asked to print out and complete the full application form which they will find in their EPSO profile on the website. It must be sent in by the required closing date. (5)

Documents to enclose

Your application must give full details of your citizenship, studies, and professional experience. You must enclose with it the following documents:

- a detailed curriculum vitae,
- a copy of a document proving your citizenship (e.g. your passport, identity card, or any other official document specifying your citizenship which must have been obtained no later than the closing date for online registration);
- a copy of the diploma(s) attesting successful completion of your studies;
- where applicable, employers' references clearly indicating the starting and finishing dates and the level and exact nature of the duties carried out; you will be given more detailed instructions, via your EPSO profile, on how to present your professional experience.

On a separate sheet, a numbered index of these documents.

All documents not in English, French or German must be accompanied by a translation into one of those languages, which you may do yourself.

A CURRICULUM VITAE DOES NOT CONSTITUTE A VALID SUPPORTING DOCUMENT.

You should only send uncertified photocopies of these documents. Paper copies of web pages and/or references to websites do not constitute supporting documents for these purposes.

When completing your application form, you may not refer to any previous application forms submitted or any other documents enclosed with such applications. None of the documents submitted with your application will be returned.

Signing and sending the form

It is your responsibility to make sure that your application form, duly completed, SIGNED and accompanied by all the supporting documents, is sent by registered post to the address below by the closing date (5) (the postmark will serve as proof of the date of sending):

European Personnel Selection Office (EPSO) C 80 Open competition EPSO/AST/41/07 B-1049 Brussels

<sup>(5)</sup> The closing date will be indicated in good time in your EPSO profile.

## Scrutiny of applications

The selection board will examine the files of the candidates with the highest aggregate marks in the admission tests a) and b) combined and a pass mark in each (see Section I.B) to determine whether they meet the conditions laid down in Section II.A.2 and 3 of this notice. The selection board will invite to the written tests those candidates who meet all the eligibility criteria.

#### You will be disqualified if:

- you do not complete your online registration by the deadline (12 September 2007),
- you do not complete and/or sign the application form (original signature required),
- you do not meet all the eligibility criteria,
- you post your application after the closing date,
- you do not send all the required supporting documents.

## 4. Reserve list

The names of the successful candidates (see Section II.B.3) will be placed on the reserve list.

- 5. If, at any stage in the procedure, it is found that the information in your online registration or official application form is incorrect you will be disqualified from the competition.
- 6. To simplify administration of the competition, please quote in all correspondence **YOUR FULL NAME**, **AS GIVEN IN YOUR APPLICATION**, THE NUMBER OF THE COMPETITION, AND THE REFERENCE NUMBER YOU RECEIVED WHEN YOUR ONLINE REGISTRATION WAS ACCEPTED.

#### IV. GENERAL INFORMATION

### 1. Equal opportunities

The European Union institutions apply a policy of equal opportunities and accept applications without distinction on the grounds of sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation.

#### 2. Selection board

A selection board is appointed for each competition. Its members are designated by the institutions and their staff committees in equal numbers. The chair and members are then appointed by EPSO's appointing authority. Their names will be published on the EPSO website after candidates have been notified whether they have been admitted to the competition.

The European Personnel Selection Office (EPSO) is responsible for all communication with you until the competition is completed. You are strictly forbidden to make any contact with the members of the selection board, either directly or indirectly. It is up to the selection board to decide whether candidates infringing this rule are to be disqualified.

#### 3. Approximate timetable

Depending on the total number of candidates, the competition will take approximately one year altogether from the closing date for online registration.

Full details will be available on the EPSO website.

## 4. Requests from candidates for access to information concerning them

Candidates involved in selection procedures have the specific right of access to certain information concerning them directly and individually, as described below. EPSO may therefore supply supplementary information on candidates' participation in the competition at their request. Candidates must send such requests in writing to EPSO within a month of being notified of their results in the competition. EPSO will reply within a month of receiving the request. Requests will be dealt with taking account of the confidential nature of selection board proceedings provided for by the Staff Regulations (Annex III, Article 6) and in compliance with the rules on the protection of individuals with regard to the processing of personal data. Examples of the type of information which may be supplied are given in the Guide for Applicants, Section III.3.

#### 5. Requests for review — Appeal procedures — Complaints to the European Ombudsman

See Annex.

## 6. Recruitment criteria/career

If you are placed on the reserve list, you will be eligible for appointment as a probationary official as and when required by the European institutions, in Brussels, Luxembourg or any other place of activity.

If you are on the reserve list and are offered a post, you will be asked to produce the originals of all the requisite documents, in particular your qualifications, so that copies can be authenticated.

Recruitment will depend on posts and funds becoming available.

Depending on the nature of a post, successful candidates on the reserve list may initially be offered a temporary contract; in this case, their names will remain on the reserve list.

Article 45(2) of the Staff Regulations requires officials to demonstrate the ability to work in a third language before their first promotion after recruitment.

Article 29(1)(b) of the Staff Regulations refers to the possibility for officials to request a transfer to another institution or agency. However, in the interests of the service, during their first three years of service newly recruited officials are transferred only in exceptional and duly justified cases. Any such transfer is subject to the agreement of both the institution or agency that originally recruited the official and the institution or agency receiving the transfer request.

#### 7. Retirement

You should note that under the Staff Regulations staff are retired:

- either automatically at the age of 65 years,
- or, at the official's own request, at the age of 63 years or where the official is between 55 and 63 years of
  age and satisfies the requirements for immediate payment of a pension,
- exceptionally, at the official's own request and where it is considered to be in the interest of the service, at not later than the age of 67.

#### 8. Grade

Assistants will be recruited from the reserve list to grade AST3.

#### 9. Remuneration

Basic monthly salary as at 1 January 2007:

grade AST3, first step: EUR 3 134,02

#### 10. Protection of personal data

As the body responsible for organising the competition, EPSO ensures that applicants' personal data are processed as required by Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. This applies in particular to the confidentiality and security of such data ( $^6$ ).

#### ANNEX 1

## REQUESTS FOR REVIEW — APPEAL PROCEDURES — COMPLAINT TO THE EUROPEAN OMBUDSMAN

Since the Staff Regulations apply to both the admission test phase and the competition, please note that all the proceedings of the selection board are covered by the confidentiality requirement laid down in Annex III of the Staff Regulations. If at any stage in either part of the selection process you consider that your interests have been prejudiced by a particular decision, you can take the following action:

#### Request for review

Within 20 days of the letter informing you of the decision being posted online, send a letter stating your case to:

European Personnel Selection Office (EPSO) C 80 Open competition EPSO/AST/41/07 B-1049 Brussels

EPSO will forward your request to the chair of the selection board where it comes within the board's remit. You will be sent a reply as soon as possible.

#### Appeal

— You can bring a case before:

European Union Civil Service Tribunal Boulevard Konrad Adenauer L-2925 Luxembourg

under Article 236 of the EC Treaty and Article 91 of the Staff Regulations of Officials of the European Communities.

 or you can lodge a complaint under Article 90(2) of the Staff Regulations of Officials of the European Communities, at the following address:

European Personnel Selection Office (EPSO) C 80 Open competition EPSO/AST/41/07 B-1049 Brussels

The time limits for initiating these two types of procedure (see Staff Regulations as amended by Council Regulation (EC) No 723/2004 of 22 March 2004, published in Official Journal of the European Union L 124 of 27 April 2004 - http://eur-lex.europa.eu) start to run from the time you are notified of the act allegedly prejudicing your interests.

You should note that the appointing authority does not have the power to amend the decisions of a selection board. The Court has consistently held that the wide discretion enjoyed by selection boards is not subject to review by the Court unless rules which govern the proceedings of selection boards have clearly been infringed.

#### Complaint to the European Ombudsman

Like all citizens of the European Union, you can make a complaint to:

European Ombudsman 1 avenue du President Robert Schuman — BP 403 F-67001 Strasbourg Cedex

under Article 195(1) of the Treaty establishing the European Community and in accordance with the conditions laid down in the Decision of the European Parliament of 9 March 1994 on the Staff Regulations and the general conditions governing the performance of the Ombudsman's duties, published in the Official Journal of the European Communities L 113 of 4 May 1994.

You should note that complaints made to the Ombudsman have no suspensive effect on the period laid down in Articles 90(2) and 91 of the Staff Regulations for lodging appeals with the Civil Service Tribunal under Article 236 of the Treaty establishing the European Community. Please note also that, under Article 2(4) of the general conditions governing the performance of the Ombudsman's duties, any complaint lodged with the Ombudsman must be preceded by the appropriate administrative actions in place at the bodies concerned.

#### ANNEX 2

#### SPECIFIC KNOWLEDGE AND SKILLS

## Knowledge and skills specific to the fields concerned:

#### 1. Operation/management of data-processing centres:

- Ability to define and implement infrastructures (hardware and software) for bringing information systems into
  production, in particular through an understanding of system requirements, coordinating the departments
  involved, production of technical documents and drafts
- Ability to analyse non-functional requirements, to draft technical specifications, and to quantify the resources required for bringing new information systems into production
- Ability to build good customer relationships to facilitate coordination between those in charge of (business)
  activities and the technical services. Drafting ability and ability to follow up the Service Level Agreement
- Ability to define and implement the optimum operating conditions, procedures and standards for the infrastructures of the data-processing centres, to monitor their availability, to program periodic work, to analyse incidents and make backups
- Ability to delimit and upgrade the basic products of the data-processing centres so that their configurations constitute a coherent operating environment
- Knowledge of and ability to apply methodologies and standards such as ITIL, COBIT, etc. for sound governance of operations
- UNIX® servers (such as SUN Solaris<sup>™</sup> and MAC OS X<sup>™</sup>) used as database servers, file servers, web servers, application servers, backup servers, ONS and LDAP directory servers, and mail servers
- Managing web servers (such as Planet Web Server, Microsoft Internet Information Server™, Coldfusion Server®, BEA weblogic applications, Apache Server Enterprise™, JBoss, etc...)
- Windows® SAMBA servers (such as Windows® 2000, 2003) used as file servers, terminal servers, supervision servers, logon validation (Active Directory), domain name servers, DHCP servers, directory duplication, data transfer, remote access services via Windows Terminal Services
- LINUX® servers (such as Red Hat™)
- Web servers (such as Apache<sup>™</sup>, Iplanet<sup>™</sup>)
- NAS and SAN storage infrastructures
- ORACLE/MS SQL® Server database management systems
- SAP™ software, integrated management software packages
- Application servers (such as JBOSS™)
- Email systems (such as Exchange/Outlook®)
- Information content management tools (ECM Enterprise Content Management), such as DOCUMENTUM™, ALFRESCO™, NUXEO, JACKRABIT, EXO

- Data access, extraction and analysis tools and editing tools for reports and data analysis (such as Business Object, PENTAHO, Web intelligence™)
- IT security (risk analysis, secure reference configuration, network protection, methodology for secure development, data-processing security management systems)

#### Development of information systems (multi-level or web-oriented client/server systems) and web development and administration:

- Data access, extraction and analysis tools and editing tools for reports and data analysis (such as Business Object, PENTAHO, Web intelligence™)
- Analysis of requirements, functional and technical specifications, data modelling, database design, solutions
  programming, administrative management and support for multi-level or web-oriented client/server solutions
  (web interfaces, web services and/or analysis of system weaknesses)
- Quality assurance, in particular via testing (unit, integration and reception) of applications, production of technical and user documentation, creation of installation and deployment procedures, and release management
- Designing and planning training courses for users
- Analysis methodology and development of IT solutions (for example RUP, AGILE, MDA)
- Drafting analysis documents and/or systems documentation
- Breakdown and representation/modelling logical enterprise processes (analytical mind, use of tools such as ARIS, MEGA, MagicDraw)
- Programming languages with their associated development environment (such as MyEclipse), including at least two in the following list: VB.Net, VB, ASP, ASP.Net™ (VB and/or C #), Java™, Oracle Forms™ and/or Oracle Developer™
- Modelling (conceptual, logical and physical), programming (LDD, LMD, triggers, stored procedures, views, etc.)
   and use (SQL) of a relational DBMS (Oracle® and/or MS SQL Server®, PostgreSQL, MySQL)
- Documentary search tools (VERITY search engine)
- Web programming languages with their associated development environment (such as MyEclipse), including in particular JAVA™, Asp. NET™, PHP™ and ColdFusion®
- Techniques for the development and deployment of web applications
- Web development, structured content production systems (CMS), programming, prototyping tools, concepts of declarative elements (HTML, CSS, XML, XSL, XSLT), elements and tools for manipulating audio and video, related architectures (REAL, Windows media, Quicktime, flash) and web video technologies (WEBCASTING)

## 3. Maintenance and administration of the user environment:

- Development and maintenance of small local applications (ORACLE®) or of advanced office IT applications (macros)
- Configuration, management, maintenance and updating of end users' workstations (Windows XP®) and the
  associated servers; in this context, the European institutions use Windows® 2000/2003 servers for archiving
  and printing, Windows and Unix servers (such as SUN Solaris™, HP/UX) as database servers (ORACLE®), for
  applications and the web (Apache™)

- Configuration, management and maintenance of office tools (MS Office 2003™, including Exchange/Outlook 2003®), and internet access tools (MS Internet Explorer 6®)
- Configuration, management and maintenance of printers and other shared resources in a network environment
- Network interaction (dynamic assignment of IP addresses, tracking down access and/or performance problems)
- User management, including the security and confidentiality aspects
- Management of services help for users, helpdesk, quality assurance, service level agreements in line with ITIL standards

#### Definition, development, deployment, management and supervision of data network/voice network services and more generally telecommunications services:

Knowledge and experience of managing projects and operational services in the fields listed below, including:

- Analysing requirements and technology markets, defining solutions, drafting technical specifications, planning (including quantifying the resources required) and implementing technical solutions and services in the field of telecommunications in general
- Operational management and coordination with the various actors involved
- Managing service level agreements (SLAs)
- Managing service continuity and availability (BCP/DRP)
- Capacity management
- Network management tools
- Knowledge of ITIL standards
- (i) Data:
  - LAN/WAN protocols and services (Switching Ethernet, VLAN, Fast Ethernet/Gigabit Ethernet, VSAT)
  - Use of internet technologies for the deployment of internal networks or network interconnection
  - Network equipment, such as routers, hubs, firewalls, proxy servers, remote-access servers, authentication, etc.
  - Network design, including wiring (especially optical fibre)
  - Network security, including user authentication, management of access privileges and detection of network intrusions
  - Wireless (WiFi) telecommunications
  - Current developments in the fields of virtual private network technologies
- (ii) Voice systems:
  - Telephone/fax systems configuration and management of PABX systems
  - Mobile communications, by satellite and wireless

- IP telephony
- accounting and invoicing systems

#### (iii) Others:

- Videoconferencing
- Broadcasting, television, teledistribution, satellites
- Integration of voice and data

#### 5. IT security management:

- Products and concepts relating to network security and computers (antivirus protection, user authentication, firewall, access management, IDS Intrusion Detection System, VPN –virtual private network, audit tools)
- Security methodologies and standards (ISO27001, ITIL®, COBIT™)
- Managing IT security (risk analysis, secure reference configuration, security policies, methodology for secure development, management systems for information processing security, continuity of operations, ...)
- Encryption technologies (PKI public key infrastructure, electronic signatures, SAML Security Assertion Markup Language, security of web services)
- risk analysis methods and information system security standards such as ISO 17799, ISO 15403 etc.

## 6. Development and maintenance of software for statistical data collection, processing and dissemination:

- Design or maintenance of statistical databases or warehouses
- Design or programming of software for statistical data processing (e.g., data collection, capture, validation, imputation, estimation, linking, coding, sampling, outlier detection, dissemination) or statistical data analysis
- Programming and use of statistical software, e.g., SAS, SPSS, STATA, FAME, etc.
- Applying and programming numerical analysis or time series or data mining or operational research methods
- Modelling of processes and specifying, visualizing, constructing and documenting the artefacts of software systems for statistical data, e.g., UML
- Design of applications and portals related to statistical data dissemination, including particular issues such as security, system monitoring, performance optimisation and Web services

## 7. Security audit of information systems

- Taking part in and carrying out audits of IT security with quality, including groundwork (such as risk analyses; systems configuration analysis and interviews), and analysis of weaknesses and drawing up recommendations
- Audits may cover various areas, such as:
  - security architectures, TCP/IP networks (routers, firewalls, network management systems, IDS), operating systems (MS Windows 2000/XP Server, Unix/Linux), databases (MS SQL, Oracle)

- managing IT security (risk analysis, security policies, methodology for secure development, etc)
- encryption technologies (PKI, WEB services security)
- methodologies relating to the management and governance of information systems (ITIL, COBIT)
- risk analysis methods and information systems security standards such as ISO 17799, ISO 15403, etc.