

ABSTRACT

1 - Partnership - Lifelong learning Leonardo da Vinci Program, phase II

Title: European Computer Networking License (supported by e_learning) - E.C.N.L.

Italian Partnership:	Vocational Training Centers	Universities, schools, Bodies	Companies P10) ELEA F.P. P15) ANASIN
<p>International partnership</p> <p>a) Slovakia</p> <p>b) Austrian</p> <p>c) Romanian</p> <p>c) French</p>	<p>P1) ELEA</p> <p>P2) ENAIP Piemonte</p> <p>P3) CSEA</p>	<p>P4) Polytechnic of Turin</p> <p>P5) ITIS C. Olivetti</p> <p>P6) ITIS Maxwell</p> <p>P7) ITIS Pininfarina</p> <p>Bodies</p> <p>P8) Regione Sardegna</p> <p>P9) ITIS Avogadro</p> <p>P16) FFR - C.G.I.L.</p> <p>P11) Zilinska University (Faculty of Management Science and informatics)</p> <p>P12) Obchodna Akademia</p> <p>P13) MASM</p> <p>P14) Bit-media Elerning solution</p> <p>P17) Universitatea Tehnica Cluj-Napoca</p> <p>P18) CR2i - CIEP (Centre de ressources et d'initiatives pour l'international)</p> <p>P19) C.I.B.C.71 Chalon sur Saône</p>	

Duration: 2 Years

Total cost of the project is 433021,50 euro
(The available funds, granted by the EC, amount to 324766 euro which cover 75% of the project cost)

Associated Partners**P20)** IIS Bodoni–(Turin)**P21)** FORTE CHANCE
Piemonte (Turin)**Coordinator:** *Marcello Tamburini*e-mail: *marcello.tamburini@tin.it*mobile: *3399279896*tel: *+39 0113183152*fax: *+390113042062*

2 - Project abstract: european computer network license (supported by e_Learning) - E.C.N.L. Project N.[I/01/B/F/PP-120132]

This project addresses trainers and training centre directors in order to aid in the adoption of innovative teaching tools and methodologies and in the updating of existing ones.

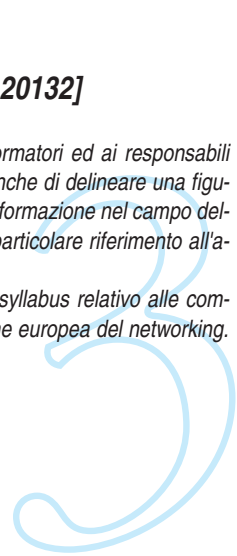
This project aims at defining a common profile for training courses in the telecommunications area, and more specifically in the computer networks area, on a European basis.

By defining a common database containing course features and teaching modules, professional profiles, which in the following will be referred to as European Information and Communication Technology Engineers and Technicians, will be outlined.

Moreover, a syllabus concerning required skills for obtaining the European networking certification will be provided.

Il progetto è rivolto ai formatori ed ai responsabili della formazione e cerca anche di delineare una figura europea standard per la formazione nel campo delle Telecomunicazioni con particolare riferimento all'area delle reti di computer.

Inoltre verrà definito un syllabus relativo alle competenze di una certificazione europea del networking.



Title	European Computer Networking License (supported by e_learning) - E.C.N.L.	
Promotor	ELEA S.p.A. Strada Privata il Castelletto 20019 Settimo Milanese (Milan)- Italy	
Field	Telecommunication (specifically in the field of computer networking)	
Partnership	<p>A total of 19 partners participate in the project, among which 12 Italian, 3 Slovak, 1 Austrian, 2 French and 1 Romanian partner.</p> <p>The majority of partners are secondary schools and Universities, but there are also 2 enterprises.</p>	<p><i>Totale 19 partner, di cui: 12 italiani, 2 slovacchi, 1 austriaco, 3 francesi, 1 rumeno.</i></p> <p><i>Si tratta prevalentemente di Scuole (High school) ed Università. Le aziende in totale sono 2.</i></p>
Receivers of the plan	<p>Directors of educational facilities directors (high schools, universities, training centres), coordinator of training projects, project evaluators (e.g. regional committees in Italy).</p> <p>Users of vocational guidance and professional training users can also be considered as (indirect) receivers, since skill self-checking for vocational guidance is within the scope of this project.</p>	<p><i>Direttori della formazione (Scuole, Università e Centri di Formazione); coordinatori di progetti di formazione, valutazione di progetti (es. per l'Italia le commissioni regionali).</i></p> <p><i>Sono anche da considerarsi destinatari (indiretti) gli utenti della formazione (il progetto infatti prevede la realizzazione di skill di autovalutazione per l'orientamento alla formazione, che gli studenti interessati potranno utilizzare).</i></p>
Aims of the project	<ul style="list-style-type: none"> ● to define a model for training courses in the ICT field ● to lay the basis for a common European professional profile (in synthesis, to promote the use of the I.F.T.S. project on a European scale) ● to define a syllabus for a European networking license ● to create an information and vocational guidance web site for trainers and other potential users 	<ul style="list-style-type: none"> ● <i>Definire un modello di corso di formazione nell'area ICT</i> ● <i>gettare le basi per una figura professionale europea comune (in sintesi esportazione del progetto IFTS su scala europea)</i> ● <i>Definire un SYLLABUS per impostare una licenza europea del networking</i> ● <i>Creare un sito WEB di informazione e di orientamento per formatori e potenziali utenti</i>
Concrete realizations	<p>Data base of a c.f.u. (Capitalizable Formative Units) and a modular project of a European training course.</p> <p>Procedure for assessing skills, credits, correspondences. Web site with information, materials and database of tests to be used for vocational guidance.</p> <p>Syllabus compilation (topics, evaluation tests, contents) for a European networking license.</p>	<p><i>Data base di unità formative capitalizzabili e progetto modulare di un corso di formazione europeo.</i></p> <p><i>Modalità di accertamento competenze, crediti, equipollenze. Sito web, con informazioni, materiali e data base di test per l'orientamento.</i></p> <p><i>Redazione del syllabus (argomenti, test di verifica, contenuti) per una licenza europea del networking.</i></p>
Background	<p>ISFOL Project on training standards (PO 930002/1/9 action 6) Public Instruction Mi-nistry PON 2000-2006 of 3/15/2001.</p> <p>IFTS Vocational training courses.</p> <p><i>Progetto ISFOL sugli standard formativi (PO 930002/1/9 azione 6) Ministero P. I., PON 2000-2006 del 15/3/2001 Corsi IFTS</i></p>	

3 - Schedule of the project

The project, divided in 11 phases, should last two years

Start of the project: December 14th 2001

End of the project: December 13th 2003

First plenary meeting February

4th and 5th 2002

Second plenary meeting

January 20th and 21st 2003

Third plenary meeting

September 29th and 30th 2003

Between the plenary meetings intermediate meetings will be scheduled with a limited number of participants.

All the works will be reported. In order to promote contact among the different partners, suitable means will be employed for the information dissemination.

These means will have an internal function within the project during the first year and afterwards will be used as tools to involve other subjects (partners, groups or individuals), interested in training, who wish to interact with project partners.

In particular

- electronic mail
- a news group
- a forum
- a FAQ

will be organized.

4 - Project structure

In agreement with project partners, during the plenary meeting of February 4th and 5th 2002, the Leonardo project, which was formerly subdivided in sequential phases, will be rather articulated in Workpackages.

As shown in Figure 1.8

Workpackages (referred to in the following as WP) have been defined, which on the whole cover the entire project.

Even though the project will be carried out according to the previously programmed time phases, the WPs will allow the organization and structuring of project activities, in accordance with the objectives to be pursued.

Tempi e fasi del progetto

Il progetto suddiviso in 11 fasi dovrà essere realizzato in due anni.

All fine di favorire i contatti fra i diversi partner saranno utilizzati i seguenti strumenti:

- e_mail
- una bacheca elettronica/forum
- una news group
- una FAQ

Inizio del progetto: 14 Dicembre 2001

Fine progetto: 13 Dicembre 2003

Prima riunione plenaria

4 e 5 Febbraio 2002

Seconda riunione plenaria

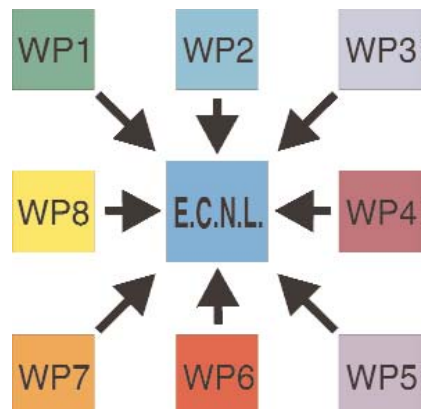
20 e 21 Gennaio 2003

Terza riunione plenaria

29 e 30 Settembre 2003

Riunioni intermedie (nazionali o bilaterali).

In talune situazioni tali riunioni potranno avvenire in video conferenza



For each workpackage, a WP leader and a work team have been identified, as listed below.
For more details, please refer to the enclosed table at the end of this document.

WP1 - Courseware profile

(Francesca Patini - ANASIN Italy and Marcello Tamburini - Coordinator)

WP2 - E_learning

(Andrea Daviddi, Silvio Santoro - ELEA s.p.a and Marcello Tamburini - Coordinator)

WP3 - identification of the competences

(Michele Dosio, ENAIP- Italy/ Serge Rochet, CIBC71 - France and Marcello Tamburini - Coordinator)

WP4 - Monitoring schedule

(Arianna Schiavoni and Marcello Tamburini - Coordinator)

WP5 - Quality Assurance Plan & assessment

(Claudio Demartini Politecnico di Torino/M. Klimo Zilina University - Slovakia - and Marcello Tamburini - Coordinator)

WP6 - ECNL Dissemination

(all partners)

WP7 - ECNL Syllabus

(Bartolomeo Montrucchio - Politecnico di Torino/ Silvio Santoro - ELEA spa/ Elio colosso - Enaip Italia and Marcello Tamburini - Coordinatore)

WP8 - Web gate & Internet tools

(ELEA s.p.a. and Marcello Tamburini - Coordinatore)

In this way, a management group for the whole project has also been defined.

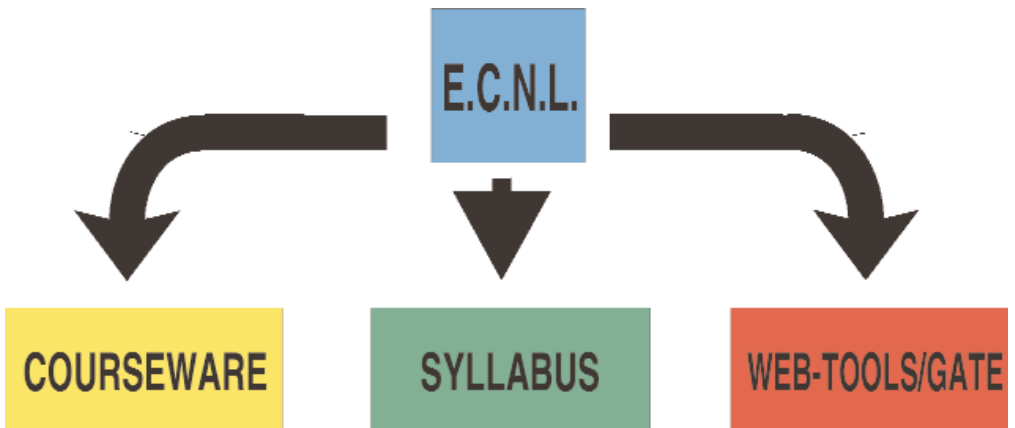
Each WP will be monitored to guarantee transparency and quality assurance in the carrying out of the project.

As further guarantee of quality, part of the project funding will be employed to assign the monitoring task to an external partnership.

5 - Achieved results

Within te to years of life of the Leonardo ECNL project, the following results were achieved (see fig.2):

- a) A European professional training model was defined and documented by means of a descriptive text.
More specifically, the following documents were produced:
 - courseware
 - ECNL certification syllabus;
 - quality assurance plan and assessment;
 - methodologies to support the educational process (e.g., portfolio and skill identification tools);
 - identification of e-learning tools that can be used for training.
- b) a Web portal was implemented to allow users worldwide to access information related to the certification and self-assess their own skills;
- c) all documents delivered in the course of the project, as well as links to various sources of information of interest to project partners and end users, were collected in a CD-ROM.



6 - General structure of educational courses

The activities carried out within WP1 were based on the educational model shown in Figure 3.

Such model was conceived in order to be efficiently experimented in secondary schools and universities. Finally, the contents of the possible professional profiles will be based on the ECNL certification, as detailed in the Syllabus within WP6.

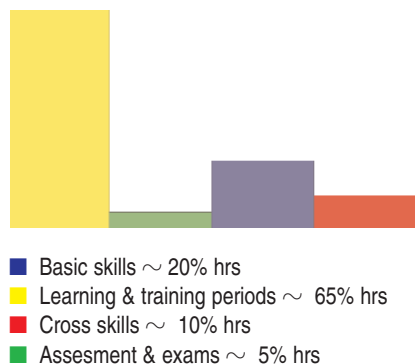
7 - Educational activities

The educational activities carried out within the project will presumably be different for the various European countries involved, since the difference in the educational systems must be taken into account.

On the contrary, all activated courses should allow gaining the same level of competence and the same formal credits.

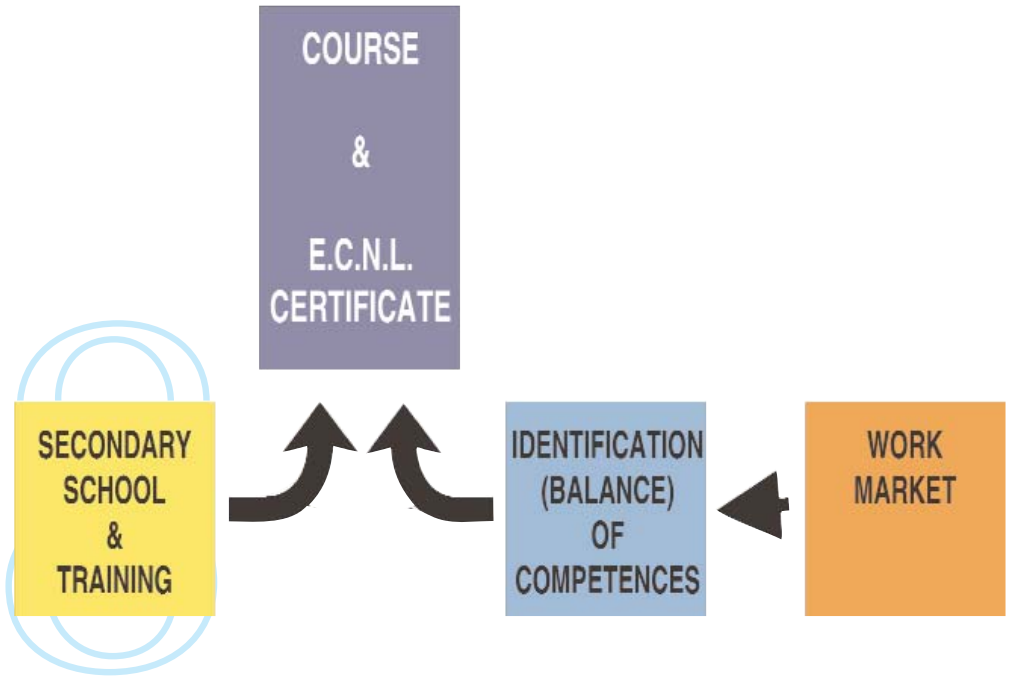
In Italy, the experimental phase of the Leonardo project will be carried out in two technical secondary schools (ITIS Camillo Olivetti, in Ivrea, and ITIS Avogadro, in Turin).

The general scheme followed in the experimental phase of the project is shown in the figure below, where the two main flows of demand are outlined, i.e. young people who have terminated secondary schools and seek their first employment, and people who want to re-qualify their professional activity or seek new professional opportunities.

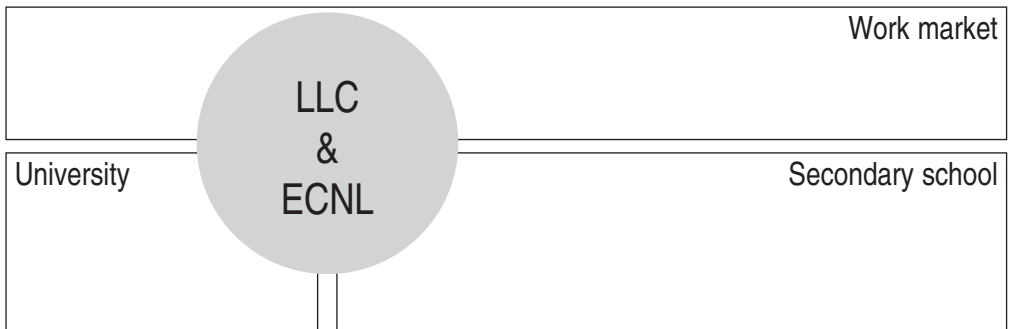


General Vocational training course Duration of the course: 1000-1200 hrs

Basic skills ≈ 20% hrs	Cross skills ≈ 10% hrs	Professional skills Technical Certified skills (ECNL certification)	Training ≈ 30% hrs	Assesments and exams
----------------------------------	----------------------------------	---	------------------------------	-----------------------------



Places in which Training courses for E.C.N.L. is given



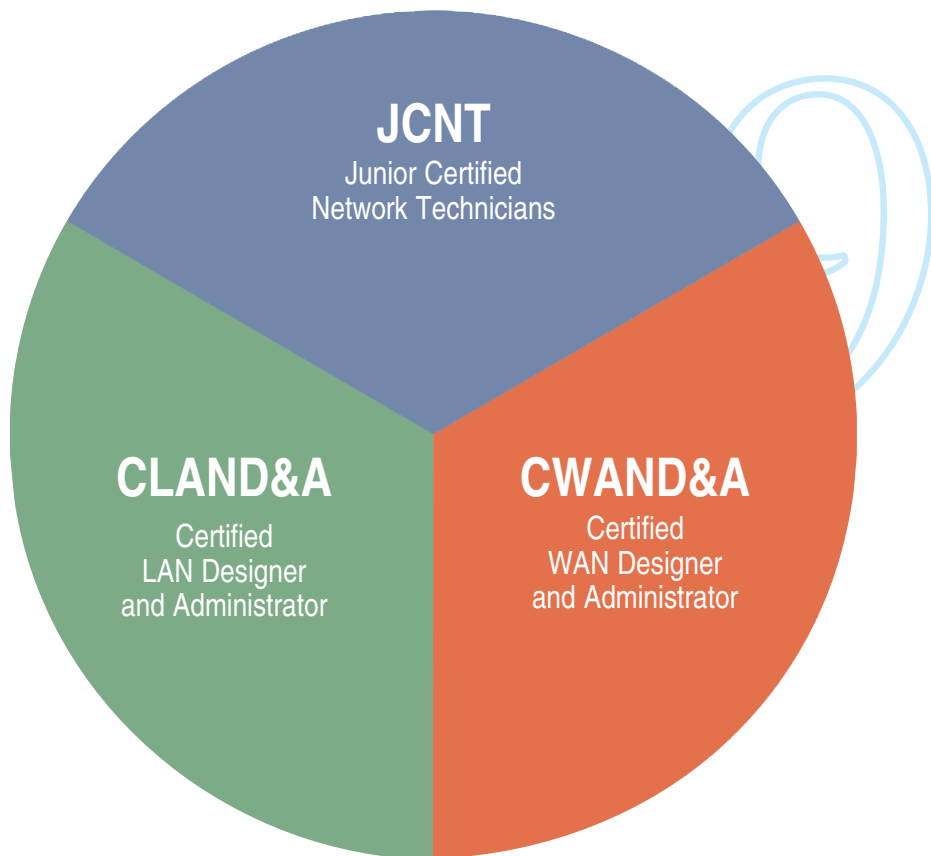
(1): syllabus and license

The syllabus

The ECNL certifications (European Computer Networking License), highly supported by e_learning, show the basis and the engineer knowledge of networking and Network Operating System for home office, office, small enterprises and industry.

The ECNL certification skills, objectives and competences background refer to the project co-ordinated by International Co-operation Europe Ltd., that has as main goal setting up of a clear framework describing the roles, skills and competencies required by the ICT industry in Europe, addressed to students, institutions and government bodies (*)

Technical certification is further subdivided into levels and into areas of expertise with a focus on specific hardware (internetworking devices management, structured cabling, LAN-WAN topology and architecture, wireless) and software (Operating system, Devices managing) to provide solutions for industry, small enterprise, home-offices.



- **JCNT** Junior Certified Network Technicians
- **CLAND&A** Certified LAN Designer and Administrator
- ▲ **CWAND&A** Certified WAN Designer and Administrator