European Commission
TEMPUS

TEMPUS PROJECT:	530510-TEMPUS-1-2012-RS-TEMPUS-JPCR
PROJECT TITLE:	"*Assisting humans with special needs: curriculum for HUman-TOol interaction Network*"
ACRONYM:	HUTON
WP NUMBER:	WP.1: Development and maintenance of the network and forming of the core of experts for the delivery of the curriculum leading to the specialist degree
DELIVERABLE:	1.3. Review of the existing laboratories and IT hardware and software
Due Date:	Month 6
Submission date:	Month 6
Start date of project:	15/10/2012.
Duration:	36 months
Lead beneficiary for this deliverable:	UBG
Responsible Person:	Dr Aleksandar Sedmak, UBG
Other persons who participated in preparation of WP3.1 deliverable:	1. Ljubica Konstantinović (CR BEG), 2. Lana Popović (SUNP), 3. Aleksandar Veg (UB), 4. Nikola Jorgovanović (UNS), 5. Bojana Petrovački (CYHCI NS)

Revision: **1.0**

Dissemination Level		
NL	National level	√
IL	International level (including the Commission Service)	

European Commission
TEMPUS

DELIVERABLE 1.3: Purchased IT hardware for the web services

According to project work plan this deliverable is the first action of the WP1: **Development and maintenance of the network core and structure for support of the new curriculum**

INTRODUCTION:

The wider objective of the project "*Assisting humans with special needs: Curriculum for HUman-TOol interaction Network (HUTON)*" is the development of interdisciplinary and multidisciplinary curriculum with the laboratory educational support and *THE EDUCATIONAL TRAINING NETWORK* for the optimized use of technology that improves the quality of life of humans with special needs.

The specific objectives in the project are:

- Development of the new interdisciplinary and multidisciplinary accredited curriculum (MECHATRONICS FOR REHABILITATION) leading to the master degree in the domain of technologies for humans with special needs.
- Setup of the training **network in Republic of Serbia (RS) in the domain of mechatronics, rehabilitation engineering and medicine, and neurorehabilitation** that enables the delivery of the new interdisciplinary and multidisciplinary curriculum.
- Training of staff for providing on-the-job education and use of appropriate technologies which increases new employment opportunities.
- Training of staff for providing better medical services for humans with special needs.

WORKPACKAGE WP.1:

The project is planned with eight workpackages, where the first four are the development activities.

The workpackage (WP) 1 is dedicated to the development of the network core for support of the new curriculum.

The WP1 goal is construction and delivery of Web based training environment. This includes discussion forums, document sharing, training sessions, chats, presentations and other "e-learning" and "knowledge management" interactive platforms.

The new IT infrastructure was planned with the aim to ensure secure, high-quality and unrestricted network environment. Supporting the implementation of the curriculum network, video and IT equipment had to be configured. In order to ensure and provide the technical prerequisites for the use of new Web based techniques, review of the existing technical and IT capacity has been completed. All existing laboratories are visited, analyzed and discussed with project partners and their technical personnel. The local program board had monthly meetings and several online and mail communications with representatives of the partners from Serbia where they expressed their needs.

The analysis was overseeing by EU partners and oriented at kickoff meeting held in Belgrade.

The approved project proposal started from the following assumptions and risks:

1. Availability of the expertise in the domain of web communication,
2. Availability of staff trained for the development and maintenance of the web portal,
3. Availability of the resources for the networking,
4. Timed funding and purchasing of the hardware/software along the project activities,
5. Availability of personal resources.

The **first phase of the activities:**

1. Laboratory IT infrastructure reviewing process.

Partners: UBG and CR BEG

UBG as responsible partner for development of Web based "e-learning" and "knowledge management" interactive platform focused its analysis on data and files management hardware and software.

Analysis included:
1. The list, types, models and performance of existing data warehouse equipment and software,
2. Network infrastructure and performance (providers, download speed, upload speed, firewall configuration, etc.),
3. IT environment and supported systems,
4. Video and audio systems for e-learning support,
5. Number and level of trained personnel.

Analysis resulted:
1. The need for additional blade enclosures,
2. The need for additional blade servers,
3. The need for additional storage equipment,
4. Video-audio system not adequate for curriculum presentations requests (precise analysis of subjects movements),
5. Lack of adequate supported systems, antistatic floor, air conditioning, etc.

Partners: UNS and CYHCI NS

UNS partner performed an evaluation of the networking structures and integration possibilities in Novi Sad. Accent was set at curriculum supporting IT infrastructure.

Analysis included:
1. The list, types, models and performance of existing learning equipment,
2. Network infrastructure and performance (providers, download speed, upload speed, firewall configuration, etc.),
3. Presentation equipment,
4. Number and level of trained personnel.

Analysis resulted:

1. The need for additional students computes adjusted for e-learning requests and reserved for new curriculum,
2. The need for e-learning video processing computer equipment,
3. The need for additional large data processing equipment,
4. IT network infrastructure not adequate for curriculum requests.

Partners: SUNP and SH NP

UNS partner performed an evaluation of the networking structures and integration possibilities in Novi Pazar. Accent was set at curriculum supporting IT infrastructure.

Analysis included:

1. The list, types, models and performance of existing learning equipment,
2. Internet infrastructure and performance (providers, download speed, upload speed, firewall configuration, etc.),
3. Presentation equipment,
4. Number and level of trained personnel.

Analysis resulted:

1. The need for additional students computes adjusted for e-learning requests and reserved for new curriculum,
2. The need for office equipment for material preparation,
3. Video-audio system not adequate for curriculum and e-learning presentations requests.

The original project plan includes the following IT equipment:)1x blade enclosure for 14-16 servers; 2) 2x Ethernet blade switch; 3) 2x FC switch; 4) 4x dual processor blade server; 5) 3x storage; 6) 16 x desktop PC; 7) equipment cabinets, 8) 9 printers, 9) 6 data projectors, 10) 6 scanners, 11) 3 digital image capturing systems.

The financial summary is in the Table (in €)\

Instruments	UB	UNS	SUNP
Blade enclosures/servers /storage for data and file management - Servers	11700	0	0
Learning computers	3000	6500	3500
Presentation audio-video system – input/output interfaces	3500	0	500
Data management computers	2200	4000	0
Office equipment for material preparation - printers	0	0	500

Network links and hardware	3000	3000	0
IT supproted systems - Adaptation of the teaching facility	5900	0	0
TOTAL	**29300**	**13500**	**4500**

The funds planned are the estimates based on the detailed review and contacts with possible providers and are 90% of the approved funds for the Laboratory instrumentation approved by the TEMPUS office.