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:	1.1. Network structure development

Due Date:	Month 6
Submission date:	Month 6
Start date of project:	15/10/2012.
Duration:	36 months
Lead beneficiary for this deliverable:	UB
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Revision: **1.0**

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

DELIVERABLE 1.1: Network structure development

This deliverable is the second 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 is completed. All existing laboratories are visited, analyzed and discussed with project partners and they technical personnel.

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.

Based on needed network structure hardware configuration has been created:

The **second phase of the activities:**

1. Network structure development

In accordance with new network structure, data for new IT equipment are prepared. Equipment will be purchased and installed at Mihajlo Pupin Institute, UB and Serbian partners.

Partners: UB

NO.	TYPE	Q	CHARACTERISTICS	DESCRIPTION
1.	BUSINESS CLASS LAPTOP	1	Core i3-3110M 2.4GHz 3MB 4 GB DDR3 1600 MHz PC3-12800 SSD SATA III 128GB FDE WIN7 / WIN8 30,7 cm (12.1") WXGA LED 1x digital mic & 1x FHD cam w/ Lync Bay Projector 1.5 LED 3 x USB, 1 x HDMi, 1 x e-Sata, 1 x VGA 802.11a\b\g\n (WW) Bluetooth Module V4.0 1st Battery 6cell 72Wh (6,700mAh) 2nd Battery 6cell 27Wh (2,600mAh) DVDRW Windows 8 Pro – 64 bit или еквивалент CASE MINI 13 Case Midi 13	Data management computers/ Learning computers
2.	*DESKTOP COMPUTER*	1	C i7-3820 CPU Core i7 3820, 3.6GHz, 10Mb L3 DDR3 8GB 1333MHz CL9 240pin 1024-HDMI-DVI VGA PCI-E 1024MB DDR3 HDD 1 TB 7200rpm / Serial ATA III / 6.0Gb/s SSD 128GB, SSD320, SATA III, 2.5" DVD±R Miditower Case 400W-GPS, 2xUSB+Audio ATX 2xPCI, 1xPCI-E, VGA, 8xSATA, DVI, HDM 23" 1920x1080 Wide LED IPS Keyboard, USB Optical USB Mouse Windows 7 – 64 bit	Data management computers/ Learning computers
3.	*BLADE SERVER*	1	BL460c Gen8 E5-2640 1P 32GB Svr 300GB 6G SAS 10K 2.5in SC ENT HDD	Network structure: Blade enclosures/servers /storage for data and file

NO.	TYPE	Q	CHARACTERISTICS	DESCRIPTION
				management - Servers
4.	*BLADE SERVER ENCLOSURE*	1	BLc3000 4 AC-6 Fan Full ICE 6125G Blade Switch Opt Kit	Network structure: Blade enclosures/servers /storage for data and file management - Servers
5.	STORAGE	1	P2000 G3 MSA FC/iSCSI DC SFF Array 300GB 6G SAS 10K 2.5in DP ENT HDD P2000 Remote Snap Software LTU	Network structure: Blade enclosures/servers /storage for data and file management - Servers
6.	DIGITAL SLR CAMERA	1	CMOS sensor FX format with 36,3 megapixel ISO 100–6400 25.600 img/sec full HD video 1920 x 1080p	Presentation audio-video system – input/output interfaces

Partners: UNS

NO.	TYPE	Q	CHARACTERISTICS	DESCRIPTION
1.	BUSINESS CLASS LAPTOP	4	Core i7-3520M 2.90GHz/4MB 8GB RAM DDR3 (1600) HDD 500GB/ 7200rpm Hard Drive Accelerometer Protection 15.6" FHD+ (1920x1080) LED AG 3 x USB, 1 x HDMi, 1 x e-Sata, 1 x VGA WLan 6205 AGN Glan BT 4.0 9c Li-Ion DVDRW Win7 Pro 64 Finger Print Reader Track Point Navigation Magnesium Alloy Protection Cage Metal Hinges	Learning computers
2.	BUSINESS CLASS LAPTOP	1	Core i5-3317U 1.70GHz/3MB 4GB RAM DDR3 (1600) WLan 6205S AGN, BT 4.0 SSD 256GB 4c Li-Ion 14.0"HD Premium LED AG Finger Print Reader, 4-1 CR Track Point Navigation Hard Drive Accelerometer Protection Carbon Fiber Reinforcment Metal Hinges	Data management computers

			Win7 Pro 64	
3.	BUSINESS CLASS LAPTOP	1	Core i5-3427U 1.80GHz/3MB 4GB RAM DDR3 (1600) WLan BGN, BT 4.0, UltraNav HDD 500GB 7200rpm 3c Li-Ion 14.0"HD (1366x768) LED AG Finger Print Reader Track Point Navigation Hard Drive Accelerometer Protection Carbon Fiber Reinforcment Metal Hinges Win7 Pro 64	Data management computers
4.	BUSINESS CLASS LAPTOP	1	Core i5-3320M 2.6GHz/3MB 8GB DDR3 (1600) WLan 6205 AGN, Glan, BT 4.0 HDD 500GB 7200rpm 6c Li-Ion 15.6" HD LED AG Finger Print Reader Track Point Navigations Hard Drive Accelerometer Protection Magnesium Alloy Protection Cage Metal Hinges Win7 Pro 64 DVDRW	Data management computers
5.	*DESKTOP COMPUTER*	5	C i7-3820 CPU Core i7 3820, 3.6GHz, 10Mb L3 DDR3 8GB 1333MHz CL9 240pin 1024-HDMI-DVI VGA PCI-E 1024MB DDR3 HDD 1 TB 7200rpm / Serial ATA III / 6.0Gb/s SSD 128GB, SSD320, SATA III, 2.5" DVD±R Miditower Case 400W-GPS, 2xUSB+Audio ATX 2xPCI, 1xPCI-E, VGA, 8xSATA, DVI, HDM 23" 1920x1080 Wide LED IPS Keyboard, USB Optical USB Mouse Windows 7 – 64 bit	Learning computers
6.	*NETWORK ROUTER*	1	Wall position, AC 220V/50Hz, RJ45, Gigabit Ethernet PoE, 1000BASE-T 802.3af, 10/100/1000Mb/s, RS232 speed≥9600b/s, IEEE802.11b, IEEE802.11g, IEEE802.11n, IEEE802.11i, IEEE802.1X, RFC 5415, RFC 5416, CAPWAP, CAPWAP za 802.11	Network links and hardware

NO.	TYPE	Q	CHARACTERISTICS	DESCRIPTION
1.	BUSINESS CLASS LAPTOP	5	Core i5-2520M 2.5GHz 4GB (4GB x 1) DDR3 1333MHz 500GB 7200rpm 15.6" HD LED 1366 x 768 2.0 Mpix 4x USB 2.0, Display port GigaLAN, WLAN 802.11a/b/g, Bluetooth 6 celija Lithium Ion DVD+/-RW SuperMulti Dual Layer Windows 7 Professional CR 4/1	Learning computers
2.	MULTIFUNCTION PRINTER	1	600 x 600 dpi 18 p/m in black Laser 400 MHz	Office equipment for material preparation - printers
3.	MULTIFUNCTION PRINTER	1	600 x 600 dpi 16 p/m in black 14 p/m in color Laser 600 MHz	Office equipment for material preparation - printers
4.	*PROJECTOR*	2	Bright projection – 2600 ANSI Lumens, SVGA resolution, 4000:1 contrast ratio, HDMI input, up to 6000 hrs lamp life, lightweight and portable	Presentation audio-video system – input/output interfaces