[handwritten: TITULO ABREVIADO DO DOCUMENTO]

IEEE ACADEMIC PORTUGAL (UNIVERSITY-LEVEL)

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(Report of Activity: Conception of a video lesson course) *[handwritten: Design]*

Abstract—This report describes the activities I elaborated in the creation of video lessons that will be posted on the site of IEEE Academic Portugal. The emphasis of this report goes to the various processes followed up to the final elaboration of the video lessons, such as the planning and evolution up to the planned objective. *[handwritten: Production]*

Index Terms—Video lessons, Routing Protocols and Concepts, Static and Dynamic Routing, RIP, OSPF.

[handwritten: Why? There are not related with video production!]

1 INTRODUCTION

THE aim of this activity was to elaborate *[handwritten: produce]* educational video lessons regarding the subject of Routing Protocols and Concepts, more specifically Static Routing and Dynamic Routing (RIP and OSPF Protocols). Within the context of the Personal Portfolio subject, I decided to elaborate educational videos about Network Architecture. I centered the making of my videos on the knowledge acquired in the Cisco Certified Network Associate (CCNA) certification in the subject Network Architecture and in my Pedagogical Aptitude Certificate as well as in my experience as a tutor. In my opinion these types of educational videos are very important because everyone has different learning rhythms and therefore learn at a different pace. Since the objective of theory is to understand how to apply the contents, I also made practical videos where the way the theory is actually used is clearly shown.

2 OBJECTIVES

My initial objective was to provide other students and members of the IEEE Academic Por-

tugal with alternative ways of learning about Routing Protocols and Concepts. The ultimate objective will be to be able to produce final versions of the video lessons that will arise from the pilot videos I am now presenting in this activity. *[handwritten: ??]*

2.1 Programs and software used

For my pilot video lesson slides I used Microsoft Office Power Point and for the practical video lesson the program used was the emulator GNS3 which is software that plays the role of a given environment in order to allow the execution of other software on it. As for the imaging, I used real images from the Cisco IOS 3725 router. The video editing software used was Final Cut Pro and the project was done in a 27" IMac. *[handwritten: developed]*

2.2 Activity Planning

After the first session on the subject of portfolio where the various activities that could be proposed were presented in the context of this subject, I chose the one presented by IEEE-IST. The proposed activity referred to the IEEE Academic Portugal (UNIVERSITY LEVEL) project, a teaching platform that resorts to short videos to explain various contexts, preferably associated with the courses ministered at Instituto Superior Técnico. Being a 3rd year student e having had already acquired certain technical

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	ACTIVITY					DOCUMENT						
(1.0) Excelent	Objectives x2	Options x1	Execution x4	S+C x1	**SCORE**	Structure x0.25	Ortogr. x0.25	Gramm. x0,.25	Format x0.25	Title x0.5	Filename x0.5	**SCORE**
(0.8) Very Good												
(0.6) Good												
(0.4) Fair	1.6	0.8	3.2	0.8	6.4	0.23	0.2	0.18	0.23	0.5	0.5	1.84
(0.2) Weak												

skills prior to the attendance at the university in the network area, including having Cisco professional certification, I considered the fact that I could share with some of my colleagues my knowledge using this platform. Therefore, I contacted IEEE Academic for a meeting on the 12th of March 2014 at 19h30, in room 2.4, where I presented my proposal to show videos about Routing Protocols and Concepts. Members of IEEE Academic Portugal commitee in IST-Taguspark Ricardo Câncio Silva, Gonçalo Carito and Miguel Brotas were present in that meeting. The objectives of my activity were discussed and IEEE presented the specifications that the videos had to have such as: average length of the videos (between 8 and 10 minutes), the format in which they had to be as well as the correct identifying image of IEEE in the beginning and the end of the video, the obligation of good quality recording with defining image resolution, being that all the rest of the contents were my own responsibility e there was no date limit set for the handing in of the videos. At the end of the meeting a data was agreed upon so that the recording of the videos could be done in the meeting room because it was the ideal place for it, both in terms of equipment as well as in light and sound.

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2.3   Preparation for the activity

Before the set date for the recording of the videos I searched and enquired about the contents that were going to be presented in them. Taking the official subject program of the subject Computer Architecture, that encloses the contents that I intended to present at a curricular level, as a starting point and with the help of the CCNA official training manual that I used during my learning process, I established the exact themes that would be presented in the videos, which key words and fundamental points of each topic I should focus on, to be more exact static routing, RIP protocol and OSPF protocol.

3   VIDEO RECORDING

On the date agreed upon with the members of IEEE Academic I went to the room at the IEEE Academic for the recording of the videos. They were made in the existing IMac in the room and were taped with CamStudio software. This software server allowed the taping of the desktop of the computer´s operating system (MacOS) while passing slides with the theoretical basis of the topics presented while simultaneously recording the GNS3 emulator for the practical parts. As I already knew how to work with this software there was no need to acquire further knowledge for the execution of this activity. There were 6 videos recorded about the following topics:

1) Download and instalation of GNS3;
2) GNS3 configurations;
3) Introduction to Routing and Packet Forwarding
4) Router Configuration Lab about Static Routing
5) Introduction to Dynamic Routing Protocols
6) Router Configuration Lab about Dynamic Routing

The videos were taped and edited during a period of 5 days (from the 2nd to the 6th of June 2014). Because of my lack of experience I had to tape some of the topics more than once for my first video. However, for the following videos there were no repeat recordings. At the end of the recording I chose to also do the video editing. Even though I had already done some home videos, I believed that this way I would also learn how to edit images in a more professional manner.

4   POST PRODUCTION

The videos were edited with I Cut Pro software that is currently used by IEEE Academic for all the videos that are made with their seal of identity. As it was a completely unknown software for me I had the need to learn how to use it so that I could cover all the requirements the team demanded. So that I could edit the videos in a professional way I researched various video tutorials in the internet, made by people with proven professional experience

in video editing that would allow me to learn some of the technics I would need, such as: placing the videos in the right sequence, scene transition, text placement, placement of the IEEE Academic logo, image placement, coordination between image and sound, among others. One of the rules of IEEE Academic was placing the introduction that is presented in all the videos and that links the video with the identity of the brand. To do this I had to ask the team, by email, that they sent me the brand image, so that the identity could be maintained. The editing of the videos took approximately 5 days.

5 PRESENTATION OF THE ACTIVITY

When I established that the videos were complete and in accordance with what was previously specified by the team I sent an email to request another meeting with the members of the IEEE Academic team. On the set date I presented my various videos and the feedback I received from the team was very positive. However, I had to do an alteration to the 6 videos so that they would be in accordance with the rest of the IEEE Academic videos. During the execution of the video it would be necessary to place my identificationa as voice-over? This extra detail had to be done with the same format as the one used in the remaining videos e would be placed in the beginning of the video. So I had to edit the videos once more and correct the previous situation which was just to alter the font. This alteration was a simple and quick task. I requested another meeting at a later stage for the 19th of June 2014 to confirm if the alteration was as requested. It was approved and proof of activity was issued. This was the last meeting in this phase.

6 THEMES FOR THE NEXT VIDEOS

Any work can be extented and this one is not an exception. The general idea of creating the necessary contexts that the viewers or students need is surely a plus for all concerned. This is true for me because I acquire new experiences and manage to challenge myself in other fields of study. This can also serve as a way to further my acquisition of knowledge by stepping outside the box and looking at other areas of knowledge. Therefore, I would like to continue pursuing other learning subjects which I could make available in the form of video lessons for students and viewers who are interested in learning.

7 CONCLUSION

The decision of the scope of the course subject was not too difficult to decide on as I already had some ideias that I wanted to put into practice for some time. This activity was useful to make me aware of the difficulties I might encounter when planning to elaborate online lessons if I do not do a profound and extensive research previously. Previous knowledge makes all the preparations easier and clearer.

ACKNOWLEDGMENTS

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Referências hão citadas no texto

In this type of document (technical), the Conclusion should start with a summary of the subject addressed and then should highlight the results.

APPENDIX
PROOF OF ACTIVITY PROVIDED BY IEEE

Certificado de Actividade

IEEE-IST Student Branch

O IEEE-IST Student Branch certifica que o(a) aluno(a) **Ângelo Pingo**, número **72413**, realizou a actividade *IEEE Academic Portugal (University-Level)* juntamente e com o apoio da equipa do IEEE Academic Portugal - Instituto Superior Técnico, projecto integrado nas actividades do IEEE-IST Student Branch, durante o 2ºSemestre do ano lectivo 2013/2014.

Vice-Chair of Technical Activities

SIGN HERE

(Gonçalo Carito)