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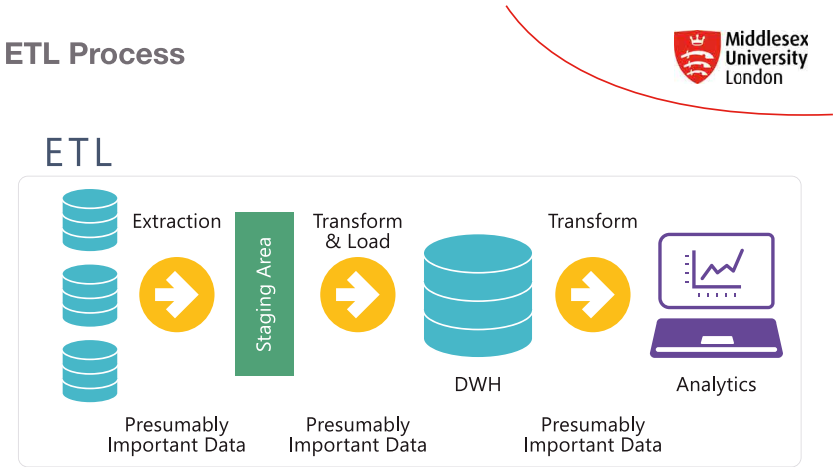
Academic Highlitghts

REACH PROJECT: MIDDLESEX UNIVERSITY ICT TRAINING HAS BEEN SUCCESSFULLY COMPLETED

In the framework of the REACH project (Reinforcing access to cross border employment at Palestinian higher education institutions), between 24 and 28 January 2022 the Middlesex University carried out the ICT training for Palestinian professors. It has been a 5 full-days training in which several professors and experts tackled a wide range of subjects related to Networks and Information Systems, also in view of cross-boarder employment, and a great opportunity for Palestinian professors to exchange views, ask for recommendations and best practices. More than 30 Palestinian professors participated and 9 Middlesex University professors gave training on: Software Defined Networking, Network Security and Cyber Security, Management Information Systems, MDX Works and Employability Services at Middlesex University, Web Application Development, Introduction to Data Science, Introduction to Deep Learning and Neural Networks, Data Visualisation, Introduction to Machine Learning, Data Analytics and Visualisation, Artificial Intelligence and Machine Learning in Cyber Security.

Guglielmo Marconi University, as partner in the project, will gave trainings on Soft Skills in Spring 2022 and the other European partners (University of Alicante and University of Ljubljana) will cover Translation and Linguistics, and Engineering.

REACH is a 3 years Capacity Building in Higher Education project started in January 2020 and funded by the European Commission in the framework of the Erasmus Plus Programme. It aims at enhancing the capacity of Palestinian Universities in promoting cross-border employability of their graduates.



This will be achieved through a constructive cooperation among Palestinian and European partners that together will develop trainings for both academics and students on technical skills (Information and Communication Technology, Translation and Linguistics, Foreign Language Teaching, Mechanical Engineering, Robotics), soft skills and free-lance readiness skills. Guglielmo Marconi University, partner in REACH project, has a crucial role being responsible for the Communication and Dissemination, as well as being actively involved both in the Baseline Analysis, with the questionnaires drafting and analysis, and in the Training Development and Delivery.

For more information on the REACH project please visit the website: www.reach.iugaza.edu.ps

by Sara Cella

WORKSHOP ON 5G TECHNOLOGIES FOR FIRST RESPONDER AND TACTICAL NETWORKS

5G is not just the next evolution of 4G technology; it's a paradigm shift. It is expected to enable fundamentally new applications - with much more stringent requirements in latency and bandwidth - and provide resiliency and flexibility to the underlying network. Several standards organizations and forums, namely IEEE, the 3rd Generation Partnership Project, and the International Telecommunication Union, are working on defining the architecture and standardizing aspects of 5G technologies.
However, few organizations are focusing on how such technologies can be useful to tactical and first responder networks.

AB4Rail project participated at the *4th IEEE 5G Workshop on First Responder and Tactical Networks* which was held on 14th December 2021.

The AB4Rail described how the Adaptable Communication System (ACS) could be exploited for emergency scenarios supporting the first responders' activities.
It was detailed outlined in the speech on "Adaptable Communication System to the emergency scenario: challenges and opportunities for first responders" drawn up by Alessandro Vizzarri (*Radiolabs*); Romeo Giuliano (*Università degli Studi Guglielmo Marconi*); Franco Mazzenga (*Università di Roma Tor Vergata*); Francesco Vatalaro (*Università di Roma Tor Vergata*); Anna Maria Vegni *(Università di Roma Tre*).

The presentation of the AB4RAIL team described:

1. the concept of the Adaptable Communication System (ACS) and
2. how it can be exploited for emergency scenarios supporting the first responders' activities

For further information, please visit the conference website.:
https://futurenetworks.ieee.org/conferences/2021-first-responder-and-tactical-networks-workshop#Program

Spotlight on Research

UNIMARCONI SUSTAINABILITY PROJECT

UniMarconi started its Sustainability project in 2014, carrying out multidisciplinary scientific research on the peculiarities of distance education from the point of view of the advantages in terms of socio-economic-environmental sustainability and pursuing objectives of continuous improvement in this area.

Fabio Orecchini, professor of Energy and Environmental Systems and current head of the Sustainability Project at UniMarconi, presented "Smart University - The Sustainable Vector of Knowledge" as keynote speaker of the international Guide conference which took place in Buenos Aires, Argentina, which highlighted the advantage obtainable in various areas of sustainability, thanks to distance learning in the university education field.

As part of the University Sustainability Project, the idea of calculating precisely and dynamically, updating the value over time, the quantity of CO2 emissions avoided by distance learning compared to the classroom teaching, traditionally dominating in universities, was born.

Based on the calculation related to 2020-21, a calculation software capable of updating the parameters that affect the avoided emissions over time was developed, thus creating an "avoided emissions counter".

The counter provides, in real time on the University website, the cumulative and dynamic count of CO2 emissions avoided thanks to the distance mode of working and delivery of UniMarconi courses.

The count can be set in several modes, among which the most indicative is the one currently in use, which considers the CO2 equivalent emissions avoided since the beginning of the year and up to the moment of reading by the visitor of the website.

The counter is working continuously. During the time each user visits the website, it displays the progressive accumulation of CO2 savings since the beginning of the year, providing a correct and constant quantitative perception of the positive action on the environment due to the distance learning.

The types of consumption were analyzed in order to identify those most influenced by the methods of teaching delivery and to calculate the emissions avoided.

The most significant reductions in greenhouse gas emissions are due to:

- reduced mobility
- reduced use of the facilities, in particular of the classrooms used for the lectures

Based on the foregoing, the emissions avoided thanks to the reduction in the mobility of students and teachers and the non-use of classrooms were calculated.

The major contribution is related to the drastic reduction of student mobility.
Overall, the annual emissions avoided in this way are equal to 6,988 t/year of CO2.

The classrooms that would be necessary to carry out the face-to-face lectures were calculated according to the courses provided by the University and the number of students enrolled in each course.
Reference for the calculation of consumption and emissions of lighting was made to the UNI EN 15193 standard.

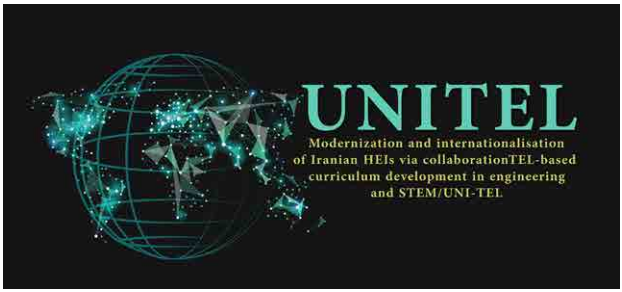
Regarding the air conditioning, for the thermal characteristics the reference was made to the UNI/TS 11300-1 standard, and to the UNI 10339 standard for the necessary air changes.

The emissions avoided for the lighting and heating of the classrooms that would be necessary for the face-to-face teaching amount to 4,551 t/year of CO2.
In all, the emissions avoided (referring to the data for the academic year 2020-21) are 11,539 t/year of CO2.

To understand the significance of this saving in terms of emissions, just think that a car with average emissions of CO2 of 100 g/km and a mileage of 10,000 kilometers per year (values in line with current market and use standards), emits a tonne of CO2 per year.

The emissions avoided thanks to the work and delivery methods of UniMarconi are therefore equivalent to the emissions of more than 11,500 cars.

UNITEL PROJECT MEETING FOR THE MODERNISATION AND INTERNATIONALISATION OF IRANIAN HEIS VIA COLLABORATIVE TEL-BASED CURRICULUM DEVELOPMENT IN ENGINEERING AND STEM



On 12 January 2022, the project meeting of the UNITEL project was held online. UNITEL is an EU project funded by the Erasmus plus Programme addressed to the Modernisation and internationalisation of Iranian HEIs.

The main purpose of the project is to support modernisation, internationalisation and accessibility of the HE system within the partner country (Iran) through the development of innovative pedagogical approaches based on collaborative technology enhanced learning methodologies.

The UNITEL project aims to achieve two main specific objectives:

• empowering engineering and STEM departments in Iranian universities in enhancing skills and competences of professors and instructional designers on innovative collaborative ICT-based practices as a means to increase curriculum modernisation and internationalization

• modernisation of engineering and STEM curriculum through the development of flexible and accessible training path boosting new educational approaches based on technology enhanced learning and collaborative methodologies.

During the project, the Iranian HEIs will enhance the implementation of multimedia remote laboratories within Universities in the Partner Country in order to multiply the cascade effects of TEL-supported approaches and guarantee the outcomes sustainability in the end.

In order to guarantee that the project responded to the target users' needs a set of well-planned activities led to the achievement of concrete results:

• baseline analysis: identifies details of the current practices and methodologies of HEIs in Engineering and STEM studies (pedagogical approaches and ICT-supported tools and systems)

• e-course for faculty staff: defines the curriculum in terms of course objectives and learning outcomes and designs the online course focused on ICT-supported tools and systems applied to innovative pedagogical approaches composed of Learning Objects that will be developed jointly by partners based on their expertise;

• piloting phase I: a total of 91 professors and instructional designers in PC HEIs will be trained using the online course delivered through an e-learning platform, which also enabled participants to share opinions, discuss issues among themselves and seek experts' advice on various situations and challenges they were confronted with.

• piloting phase II: trained faculty staff is to modernise its own course based on the acquired skills and knowledge. The modernised courses will be accredited within each PC HEI and delivered to a test group of students (at least 10 each course each HEI for 700 students).

During the meeting the content for the tutors' training content was discussed and the next challenges have been planned. Università degli Studi Guglielmo Marconi (Italy), Turun Yliopisto (Finland), Universidade Aberta (Portugal), Prisma Electronics (Greece), Imam Khomeini International University, University of Sistan and Baluchestan, Shiraz University, University of Isfahan, University of Tehran, Shahid Chamran University of Ahvaz, NAMVARAN from Iran, have actively participated to the discussion with a great commitment and involvement.

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by Ilaria Reggiani

Glance at the Future

Innovation for Energy Transition. Sustainability and Innovation after COP26

The energy transition is inevitable and necessary to face the difficulties and disasters caused by climate change.

The road to the implementation of the energy transition is certain for our country thanks to the ambitious European objectives, such as the 55% cut of carbon dioxide emissions by 2030 as foreseen by the Green Deal, to be able to reach the final objective of zero emissions and therefore the goal of climate annuality by 2050. All global economies are striving to try to combat the problem of emissions, even if, as the results of Cop 26 show, the times to achieve such neutrality are quite different from country to country.

On 16 December 2021 Guglielmo Marconi University, in collaboration with GreenHillAdvisory and the National Energy Cluster, organized the workshop "What Innovation for Energy Transition. Sustainability and Innovation after COP26 ". The event, sponsored by Banco BPM, intended to illustrate the recent regulatory measures and innovative strategies of companies to achieve the Energy Transition objectives set by the EU.

Sas-Unimarconi agreement for the training of "digital" talents

Sas-Unimarconi agreement to encourage the birth and development of innovative startups and to implement a series of courses which, having highly operational approach and being responsive to the needs of large tech companies, will be able to transmit the right skills and train professional profiles suitable for dealing with the professional challenges of the future.
As a result of the collaboration agreement "UniMarconi-SAS Acceleration Program" was launched.

The first call for "UniMarconi-SAS Acceleration Program" provided startups and SMEs, admitted to the acceleration path, with equipped coworking spaces, mentorship services and operational assistance provided directly by faculty (professors and researchers) of Unimarconi University.

The President and General director of Unimarconi Alessio Acomanni declared that the aim of the University is always to guarantee seriousness and the highest quality of the courses along with certain and defined professional opportunities.

"This collaboration underlines the increasingly active role of our university in promoting initiatives to support innovation, thus contributing to the social, economic and innovative development of the country, through the specialized training of young people and the transfer of technologies and knowledge to businesses."

GMU Magazine has been released with the contribution of all academic staff and partners around the world, if you wish to contribute higlighting any important news in accordance with the line of the release, please do not haesitate to contact us sending an email to d.chesheva@unimarconi.it