

Block 2: EDU-Pack outputs: regional scientific papers exchange
* V4 EDUPOINT Library

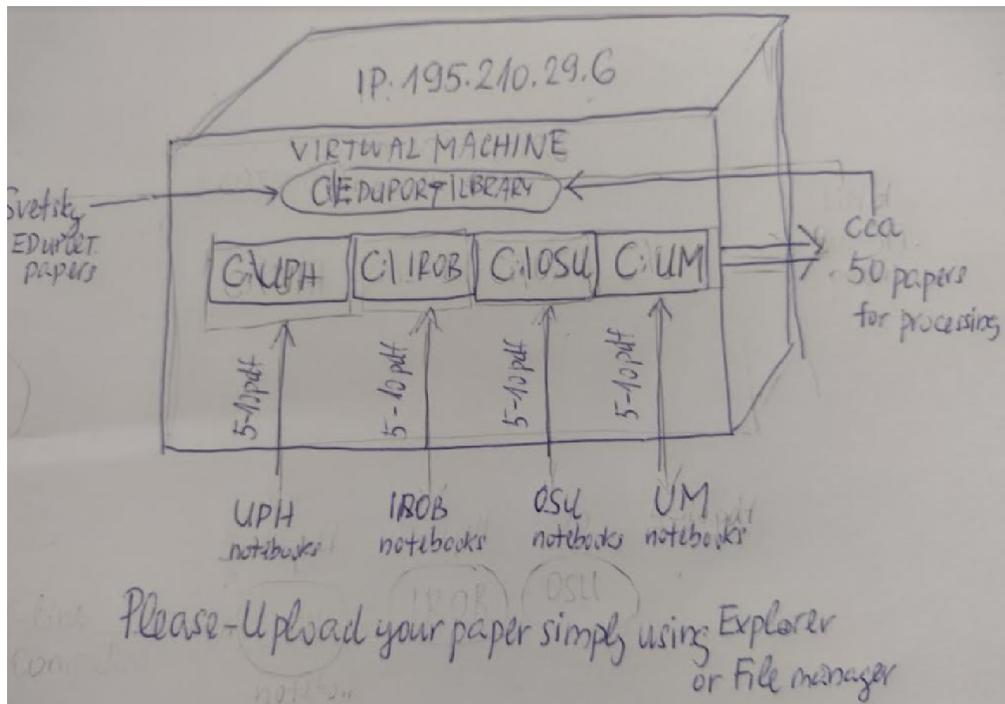


Figure1: Instruction for uploading scientific papers to the partners folders on VM project computer (Virtual Machine IP 195.210.29.6, Windows 2022)

Note: IROB delivered the pdf-papers also by email and Svetsky copied it to the folder C:\IROB on Virtual Machine shared V4 EDUPOINT computer

Output 1.1 - online public BASIC: The pdf_files-pack is accessible online at EDUPOINT space as html:

<https://eduport.stuba.sk/EDUPOINT/LIBRARY/SENDLP.HTM>

<https://eduport.stuba.sk/EDUPOINT/LIBRARY/SENDP.HTM>

The screenshot shows a web browser window with a URL bar at the top. On the left side, there is a vertical list of document titles, each preceded by a number in brackets, such as [17] HU_xxxx_EnikoNagy_Ru, [18] Kniznica_UploadovaneCl, and [38] V4_EDULEARN_Svetsky_M. The main content area on the right displays the title of a selected document: "Experience with An Interdisciplinary Approach To Removing Barriers Related To IT Personalized Support For Teachers In The Creation And Transmission Of Educational Content". Below the title, the authors and their affiliations are listed: Stefan Svetsky (Slovak University of Technology, Bratislava, Slovakia), Oliver Moravcik (Slovak University of Technology, Bratislava, Slovakia), Dariusz Mikulowski (Faculty of Sciences, Siedlce University of Natural Sciences and Humanities, Siedlce, Poland), Peter Galambos (Antal Bejezy Center for Intelligent Robotics, Obuda University, Budapest, Hungary), and Martin Kotyrba (University of Ostrava, Ostrava, Czech Republic). An abstract is also visible at the bottom of the page.

Figure 2: Screenshot example - opening for reading - the V4 Eduport project publishing paper at ICL 2022 conference in Vienna (PDF-EDU-Pack)

Output 1.2 - online public **ADVANCED**

The modified pdf_files-pack is accessible online at EDUPORT space as html https://eduport.stuba.sk/EDUPORT/LIBRARY/SEND_PLP.HTM

https://eduport.stuba.sk/EDUPORT/LIBRARY/SEND_PP.HTM

Into the basic WPad table SEND_PDF abstracts were copied manually, **plus it was html-formatted**, and in one record a note was made by the designer (Svetsky argues that ONTOLOGY could be a shared expertise of partners because WPad table is a primitive knowledge representation) - it is optimally to make a basic table by a teacher and give instruction for a student to modify the WPad table SEND - teachers have not required time for it



Figure 3: Screenshot example - a final version for eLearning or writing papers

Output 2 - at online VM project computer - not public: The same pdf_files-pack as html is accesible on the remote project's VM computer using the default browser (i.e. it is case when using Microsoft EDGE browser in VM)

a) folder with pdf-files: c:\eduport\library

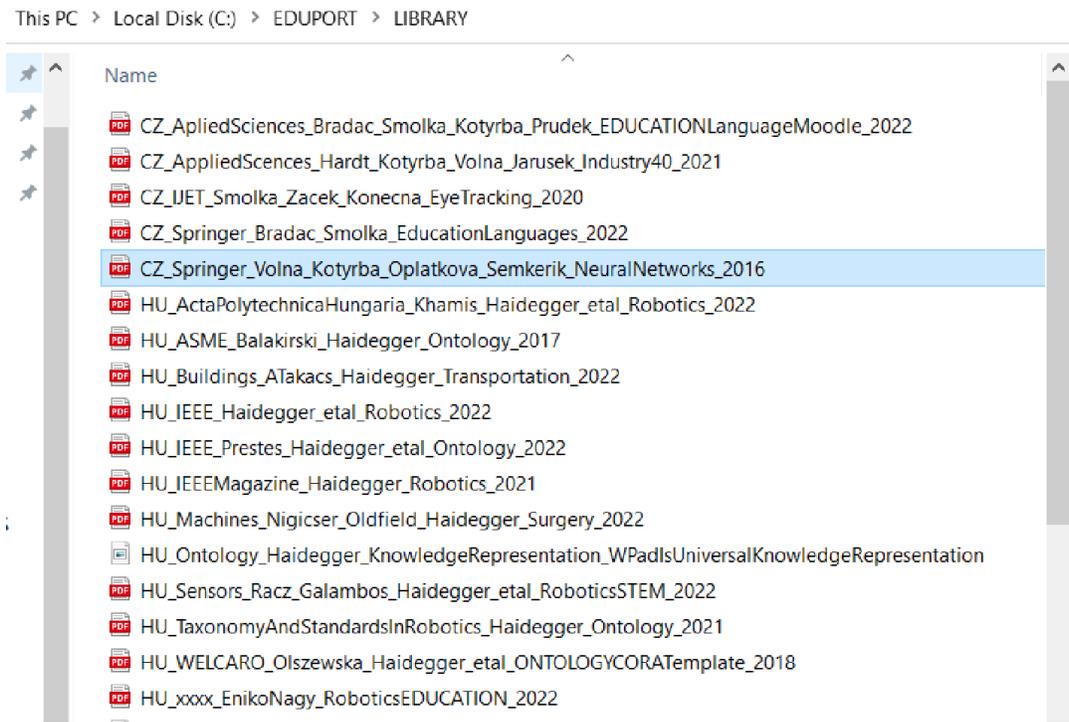


Figure 4: Screenshot example - c:\eduport\library folder with pdf-papers

b) reading from desktop HTML-table - it is the same table as is at the internet. It is in VM project computer (c:\sv\qsv\SEND_PLP.HTM), or in off-line mode or one can read it from his notebook from VM desktop as illustrated the following image if paths are synchronised

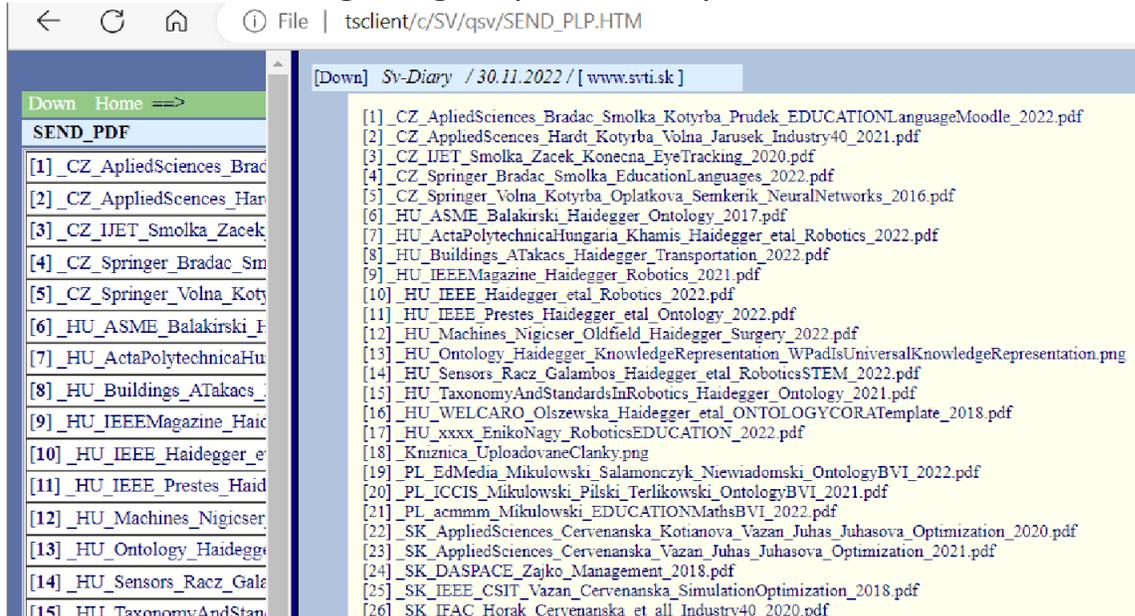


Figure 5: Screenshot example - opening for reading on VM but it illustrates reading from offline notebook (with the same folder and pdf-files)

Note: the offline html table SEND_PDF is viewed from Virtual Machine by using this path file://\tsclient\c\sv\qsv\SEND_PLP.HTM or by Windows explorer

Output 3.1 - desktop version in online VM project computer **BASIC**-not public, however in WPad environment:

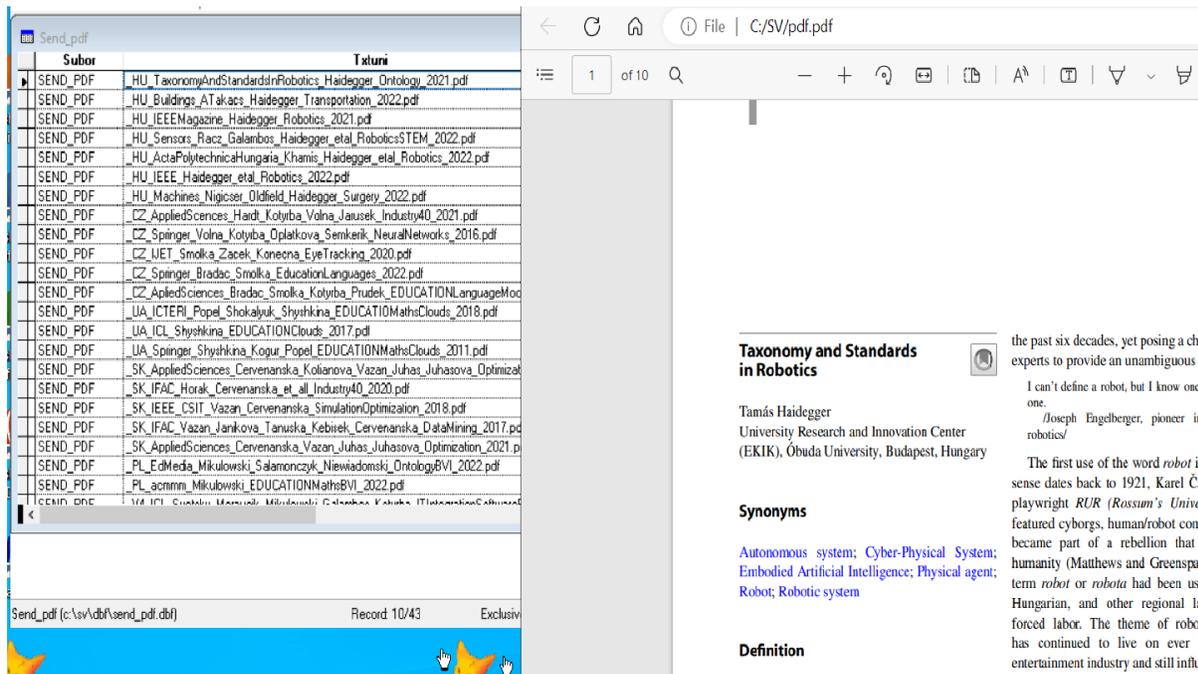
The following table is a basic row table SEND obtained by writing c:\education\library to the KOD1 column and using SHIFT-F9 - the WPad table was uploaded from notebook to VM

Output 4 - EDU-IT block: C:\SV\pdf_pack_read.exe simple application

As one can see it is not needed to see the TP plain text field with pdf formatting characters, as well, it could be good to take a pdf-package table and use it for specific purposes as are educational packages, self-study packages, etc. where all content is concentrated in one package. Within the project, EDU-IT block is planned (SK-PL) where a pilot modification for BVI users are designed (Blind and Visually Impaired). In other words, a BVI user would simply click to exe-file and can "read" the papers by BVI-readers or by EDGE or PDF-software TTS (Text to Speech) functions. It is also good because notebooks and computers have a short life time or the user change institution etc., so simply copies exe-file to USB or his repository and can use it.

Because people think, read or perform knowledge based processes generally in various ways, there are some possible variants that could be also designed as the application. This means, that controlling the Wpad tables is possible by more ways. In the C:\SV\pdf_pack_read.exe example the user only select row and close window and can read papers in a loop, exit is by ESC.

So, this application C:\SV\pdf_pack_read.exe is on VM project computer as illustrated in Figure 7 - each expert can use it, read and give requirements and ideas for modifying the application.



The screenshot shows a PDF reader application with a table of documents on the left and a selected document page on the right. The table has two columns: 'Subor' and 'Texturi'. The selected document is 'HU_TaxonomyAndStandardsInRobotics_Haidegger_ontology_2021.pdf'. The right pane shows the text of the selected document, which is a page from a paper titled 'Taxonomy and Standards in Robotics' by Tamás Haidegger. The text discusses the history of the word 'robot' and its use in science fiction and entertainment.

Subor	Texturi
SEND_PDF	HU_TaxonomyAndStandardsInRobotics_Haidegger_ontology_2021.pdf
SEND_PDF	HU_Buildings_Atakacs_Haidegger_Transportation_2022.pdf
SEND_PDF	HU_IEEEMagazine_Haidegger_Robotics_2021.pdf
SEND_PDF	HU_Sensors_Racz_Galambos_Haidegger_et_al_RoboticsSTEM_2022.pdf
SEND_PDF	HU_ActaPolytechnicaHungaria_Khamis_Haidegger_et_al_Robotics_2022.pdf
SEND_PDF	HU_IEEE_Haidegger_et_al_Robotics_2022.pdf
SEND_PDF	HU_Machines_Nigicser_Oldfield_Haidegger_Surgery_2022.pdf
SEND_PDF	CZ_AppliedSciences_Hardt_Kotyba_Volna_Jaušek_Industry40_2021.pdf
SEND_PDF	CZ_Spinger_Volna_Kotyba_Oplarkova_Semkerik_NeuralNetworks_2016.pdf
SEND_PDF	CZ_UJET_Smolka_Zacek_Konecna_EyeTracking_2020.pdf
SEND_PDF	CZ_Spinger_Bradac_Smolka_EducationalLanguages_2022.pdf
SEND_PDF	CZ_AppliedSciences_Bradac_Smolka_Kotyba_Prudek_EDUCATIONLanguagesMod
SEND_PDF	UA_ICTERI_Popel_Shokaljuk_Shyshkina_EDUCATIONMathsClouds_2018.pdf
SEND_PDF	UA_ICL_Shyshkina_EDUCATIONClouds_2017.pdf
SEND_PDF	UA_Spinger_Shyshkina_Kogur_Popel_EDUCATIONMathsClouds_2011.pdf
SEND_PDF	SK_AppliedSciences_Cervenanska_Kolarova_Vazan_Juhas_Juhasova_Optimizac
SEND_PDF	SK_IFAC_Horak_Cervenanska_et_all_Industry40_2020.pdf
SEND_PDF	SK_IEEE_CSIT_Vazan_Cervenanska_SimulationOptimization_2018.pdf
SEND_PDF	SK_IFAC_Vazan_Jankova_Tanuska_Kebirek_Cervenanska_DataMining_2017.pdf
SEND_PDF	SK_AppliedSciences_Cervenanska_Vazan_Juhas_Juhasova_Optimization_2021.pdf
SEND_PDF	PL_EdMedia_Mikulowski_Salamonczyk_Niewiadomski_OntologyBVI_2022.pdf
SEND_PDF	PL_acminn_Mikulowski_EDUCATIONMathsBVI_2022.pdf
SEND_PDF	PL_ICI_Czekaj_Horak_Mikulowski_Calcebas_Kotyba_ITIntegrationCultural

File | C:\SV\pdf.pdf

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Taxonomy and Standards in Robotics

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Synonyms

Autonomous system; Cyber-Physical System; Embodied Artificial Intelligence; Physical agent; Robot; Robotic system

Definition

the past six decades, yet posing a challenge for experts to provide an unambiguous definition. I can't define a robot, but I know one. / Joseph Engelberger, pioneer in robotics/

The first use of the word *robot* in science dates back to 1921, Karel Čechov playwright *RUR (Rossum's Universal Robots)* featured cyborgs, human/robot became part of a rebellion that threatened humanity (Matthews and Greenspan term *robot* or *robota* had been used in Hungary, and other regional labor forced labor. The theme of robot has continued to live on ever since the entertainment industry and still influ

Figure 7: After selecting row from the send_pdf table and closing window (CTRL-W) the selected paper can be read

The exe-file can be launched using icon on desktop or from TP text window writing: file://C:\SV\pdf_pack_read.exe or in the BVI case writing C:\SV\pdf_pack_read.exe to column KOD1 and usin ALT-F9

SUMMARY

In the previous text, a mass processing of eductional content from scientific papers in pdf-files was presented through several way using Wpad tables as containers. As was presented:

a) basic outputs 1.1, 2 and 3.1 - „row“ WPad tables or HTML tables can be produced in minutes by teachers or students with basic IT skills, because it is only required to have files in any folder (i.e. in our case around 40 pdf-files in folder c:\eduport\library) and click SHIFT-F9 (or use menu from previous project V4+ACARDC)

Note: „row“ means that if a teacher has a final educational set of various files thus the output can be used also for placing to educational learning space (in previous project it was already demonstrated by D. Mikulowski or K. Takacs /IROB). Be aware that a teacher, researcher, student or single user in general is not oblige to create „super“ tables

b) advanced outputs alrerady require more time to improve visual tailor-made tables

b1) when working only in WPad environment it is not time vasting and it depends only for what a teacher needs a set of WPad tables and HTML-tables are created from them simply by CTRL-F1 - it can take hours

b2) if a teacher wants to create a complex eLearning (HTML-tables) he must knows basics of HTML, i.e. to add/write HTML tags to his basic content - WPad is pre-programed that it works as a simple HTML editor and can process even a huge amounth of screenshots or images - in this case however it is needed to collaborate with designer (he has appropriate source code on his computers)

c) output 3.2 and 4 are specific cases when files are embeded automatic into the WPad table and were designed based on collaboration Svetsky - Mikulowski who are responsible for block EDU-IT - one can insert into the SEND_PDF table own pdf-papers but in the KOD1 must be properly offline path or internet links to the-

se pdf-files.

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December 2022

Note: be aware that computer files, IT hardware or software are not compatible, i.e. it is not possible to use one solution, e.g.:

*** Wpad is a desktop application running on notebooks or VM computer (cloud) - content is embeded in the tables**

*** PIKS chanells are PHP/MySQL application running only on internet - content is not in one place because database tables (with the same structure as WPad tables!) are on database servers and content must be loaded to web by PHP codes and MySQL commands (or in offline if one has instaled Apache server, WPad enables synchronisation - one can write PHP codes to Wpad tables)**

*** be aware that we have infrastructure and all-in-one software for processing educational content and tasks for partners is to deliver any kind of content so not design or test software. Because our communication only via emails would be extremely time wasting it is supposed that all partners - each with IT expertises - will use shared VM partner computer for uploading and processing content in a collaboratively way as was this collaboration for scientific papers exchange.**

Be also aware that such rapid and simple mass production of educational content on personal level is not described in scientific literature. If anyone knows about such case, do not hesitate to give us such information. It would be minimally useful for Introduction to compare our virtual knowledge approach with similar solution.