

EduArt

Simple Gateway to Effective Communication





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Quick guide to a brand new technology

Summary:

Most of big corporations, universities and public institutions are regularly capturing and distributing presentations, lectures, training materials, press conferences etc. The current standard requires including the presented data together with the audio-video and the solutions have been so far based on special hardware and thus reducing the mobility of the operation and increasing the costs.

EduArt is a purely software based product breaking the ground with a solution supporting the genuine asynchronous communication including any computer visualizable data in their full resolution. At the same time, the capturing does not represent a heavy workload on the computer and so even low cost laptops can be used. Moreover, it produces open-format html5 based web presentations manageable with generic web servers and content management servers, accessible at all PC, Apple, Linux and tablet platforms, without any post-production if not required. Thus, it allows for low cost and easy maintenance solution of lecture capturing and makes this to a mobile endeavour. But having said all this, **EduArt** clearly provides the ground-breaking possibility to individual asynchronous communication including any computer data in their full resolution.

1. Introduction – Why EduArt ?

The paradigms of social behaviour are changing faster than people imagine. Communication is perhaps effected most. We are communicating via internet in a synchronous or asynchronous way, but we realize more and more that:

- we want to communicate experience, including emotions;
- quite often the synchronized communication is not preferred;
- capturing lectures, presentations, instructions, etc. is only a small part of the process.

Email is the typical way of asynchronous communication allowing further links and attachments of any kind. Current technologies boost the presence of videos (like YouTube), and more and more universities, big corporations, as well as public institutions, adopt systems for capturing lectures, presentations or announcements and they enrich their internal communication by videoconferencing. There are also systems available allowing to include or share any computer data to the communication, eg. Skype or Webex.

EduArt is the first hardware independent solution to asynchronous communication including audio and video and any data available to the computer, without losing their resolutions.

This means

- EduArt captures presentations on any MS Windows computer
- EduArt sees any input available to the operating system
- The captured message is streamed online or on demand by any web server or content management server and it is available as regular web presentation via standard web browsers at all PC, Apple, Linux or Android platforms.
- The data flow is quite low (about 30Mb per 10 minutes of presentation), as long as the video is kept in reasonable resolution and the computer data are dealt with as fully synchronized slides.



Many analysis and studies have emerged showing the urgent need of such a product. For example, there is the Cisco strategy saying: 'Cisco Lecture Vision: Capture the Full Educational Experience, Not Just the Lecture'¹. Among other obvious features of archiving, searching, and distributing the captured presentations for everyone independent of his or her hardware, they want to introduce the option of two-point and multipoint videoconferencing across the campus. There are two questions left open there:

- What about capturing the presentations/communication anywhere in or outside of the campus (like workshops and mini-conferences held typically in a way similar to team building activities) without any need of special hardware?
- What about adding a tool which would provide the possibility for an emotional message including the entire computer based data, audio and video, but working as widely and easily as the email?

Our **EduArt** software brings answers and solutions to both of them.



¹ See http://www.cisco.com/web/strategy/docs/education/CiscoLectureVision-D28_V1.pdf

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2. Three ways of capturing lectures/messages



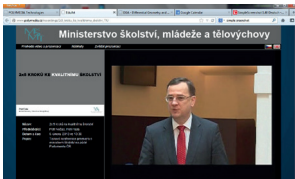
- a) Standard capturing of lectures in a lecture hall has never been easier than now with **EduArt**. Either installed on computer in the room or on the teacher's laptop, the software captures presentation slides (or any other input available at the computer screen) in 1-1 resolution and combines it with the audio and video of the lecturer into an open format web presentation. Moreover, **EduArt** provides no extra extension costs to any lecture hall already equipped with beamer, camera and audio system.
- b) Do you want to capture presentations in your own office or a distinguished meeting elsewhere? Go for the **EduArt** Mobile Solution combining a well-chosen PC Tablet with a suitable camera and microphone. Grab your beamer and off you go. According to the connectivity, you could go online, but you may upload the presentations later on, too. If you want to allow the lecturer to use his or her own laptop or Mac – no problem! We provide cheap and tested interface for that.
- c) Do you want to send a message based on data available in your computer? Maybe pictures, or marking assignments, discussing projects or articles, providing hot-line support, etc. It doesn't matter whether you are at home, in your office or in a hotel, you may simply use your internal camera, mike, and perhaps a portable visualizer and the **EduArt** in your computer does the work for you.

Whatever recording you have captured, you may distribute it via generic web servers and content management. **EduArt** will be able to upload the messages there and they are streamed to browsers at all PC, Apple, Linux and Android platforms. A local copy of the recording is always kept anyhow. The web presentation is smart, allowing great comfort and flexibility in splitting the windows etc.

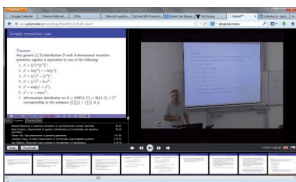
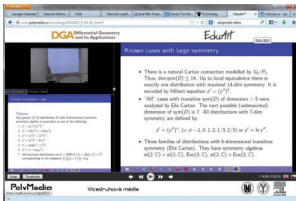
3. How does EduArt presentation look like?



M. Singer, the governor of the Czech National Bank talking on the Eurozone crises, September 25, 2012.



P. Nečas, the Czech prime-minister, gives a press conference on educational reforms on February 2, 2013



Two flexible layouts of the same lecture at DGA2013, international conference, Brno, August 2013

The captured presentations are streamed on-line or on demand and they are accessible either with the free Silverlight plugin, or in its html5 version on all platforms.

The presentation layout is flexible and can be adjusted even during the presentation. The default combines smaller video with the bigger full resolution slides, as well as the part used for metadata, break down to chapters, or the last but one slide. As we shall see, it is extremely easy to edit the metadata, provide individual banners etc.² Special buttons in the layout allow for continuous control of the sizes of the windows, and swapping them. The navigation within the presentation is also supported by the thumbnails of the slides, cf. the last picture. Moreover, each of the slides is available as a jpeg file any time just by your browser functions.

You may also open an extra window for the synchronized slides. This is particularly useful on two screen systems.

The presentations can be easily incorporated into any content management system supporting e-learning, training, etc. So far we have focused on the 'no postproduction' and 'immediate availability' strategies. But at the side of the content management server, compression and conversion to any standard format is available.

EduArt has been localized to Czech and English and is prepared for any other language, too.

The PolyMedia Technologies Company develops and provides its own content management solution too. We call it the **EduArt MediaInt-Touch** server. This is a solution based on the long time experience of distributors, integrators and academicians, for more information see <http://www.polymedia.cz/mediaintouch.php?lang=en>.

² The screenshots have been taken from the presentations captured by the EduArt software and they are available at the PolyMedia company web page http://www.polymedia.cz/recordings_hosted.php?lang=en, Except the last one which is available at http://www.polymedia.cz/recordings/DGA2013_P_D4_B1_new.

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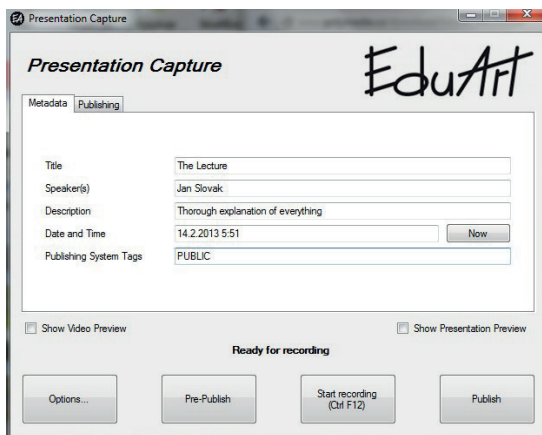
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This picture summarizes the features of default layout of the presentation.

4. How to maintain EduArt?

The PolyMedia Technologies Company is aware of the extreme maintenance costs of many products. Thus we have prepared **EduArt** to be configured easily and to be very flexible at the same time. There are two important points here:

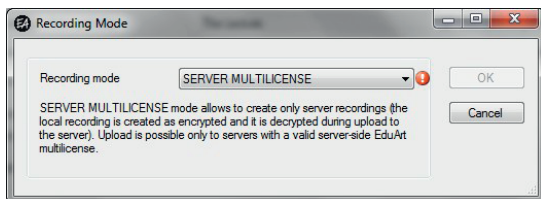
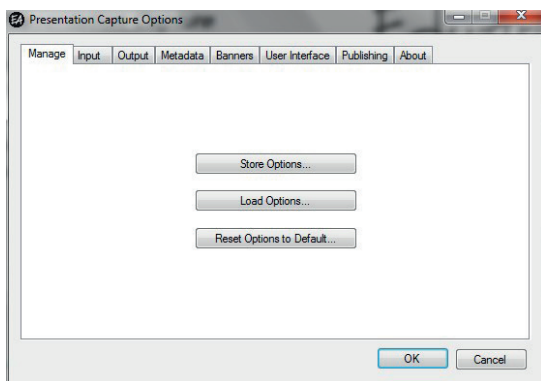
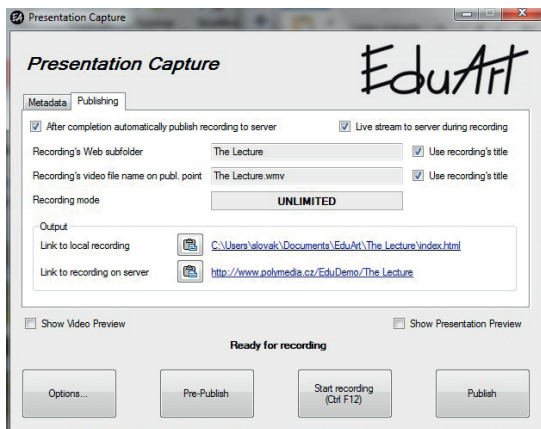


- (1) **EduArt** understands configuration files allowing to pre-configure the behavior following the institutional policy and to avoid chaotic configurations by the users;
- (2) **EduArt** comes equipped with a straightforward interface to set up the basic Metadata, the decisions on the publishing of the presentation, etc. We expect that the administrator prepares the right parameters and provides the configuration files for users. **EduArt** reads them just by clicking at the file.

In fact, such configuration files may be also produced by further web interfaces customized for particular use.

Let us comment more on the individual items (which many users do not need to know).

In particular, there is 'Publishing System Tags' line in the opening page, which allows for adding any number of tags used by the server to handle the captured presentation.



The 'Publishing' screen allows to set the options whether and how to publish the presentation. **EduArt** allows the user to go on-line, upload immediately after the session is closed, or leave this all for later (perhaps waiting until internet is available). Notice also, that the final web links for the presentation are available even with a button to copy them. The user can start and stop the recording either by clicking the 'Start recording' button or alternatively, there is a shortcut too.

After hitting the 'Options' button, you get to the screen on the second picture with many options to configure. For instance, the 'Input' allows choosing from any audio and video input seen by the operating system. The 'Output' option allows setting the display layout in the presentation, 'Banners' allows choosing the banners to be displayed etc.

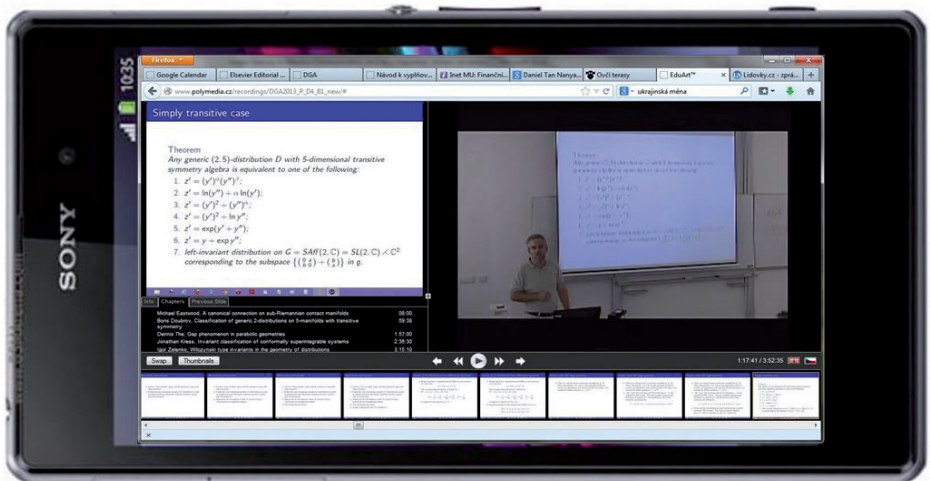
Let us explain the two basic modes in which **EduArt** operates. The first one is the 'licenced' mode, where the complete presentation is kept locally at the computer in the open format of a web presentation, and you can see it in standard files in a library, including index.html. The other option is the 'server multilicense' mode, where every copy of the **EduArt** software is able to upload the presentations to an eligible server (but the presentations

are then saved in an encrypted form locally). During the upload, the video is also transcoded to the html5 video standard. The latter option is meant for large institutions like corporations or universities with

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many concurrent users who can easily download the free EduArt version from the pages www.polymedia.hk. This free version works also as the licenced one, but with 4 minutes maximum for one capture, under the 'demo' mode. The configuration file for particular server upload will be provided by the institution running it. The server delivered under the server multilicence also serves as a simple data storage allowing for maintenance of the uploaded presentations by the authors and administrators. Those who use a few single licenses for the EduArt, but want to maintain the presentations in a dedicated data storage, as well as offer the html5 versions of the presentations, can acquire the **EduArt** 'server individual license' which works exactly as the multilicence, but does not accept the encrypted presentations from the unlicensed capture utilities. As mentioned above, the html5 versions of presentations can be viewed on all PC, Apple, Linux, and Android platforms, including tables and smartphones.



As emphasized above, the EduArt software has been programmed with special care to keep the computer power requirements very low. Thus literally every low-end laptop will be able to deal with presentations, capturing, and on-line streaming at the same time.

5. How to get and use EduArt?

The general strategy of PolyMedia Technologies is to make EduArt as accessible to users as possible. At the same time, we want to guarantee maintenance and upgrades of the product. Thus we are quickly extending our network of distributors at all continents.

The web pages www.polymedia.hk or www.polymedia.cz provide free download of the full version of the product for everybody. This is fully operational and can be used in the 'server multilicense' mode, as soon as the user will have a link to at least one such server. But it also works in the so called 'demo mode', which is the same as the unlimited one, up to the time limit of 4 minutes maximum per each capturing. The full features of the 'licensed mode' are available upon providing the proper license key. As soon as you have got your **EduArt** installed, you can upgrade or provide the license key in the future. Just learn yourself, coming to www.polymedia.hk.

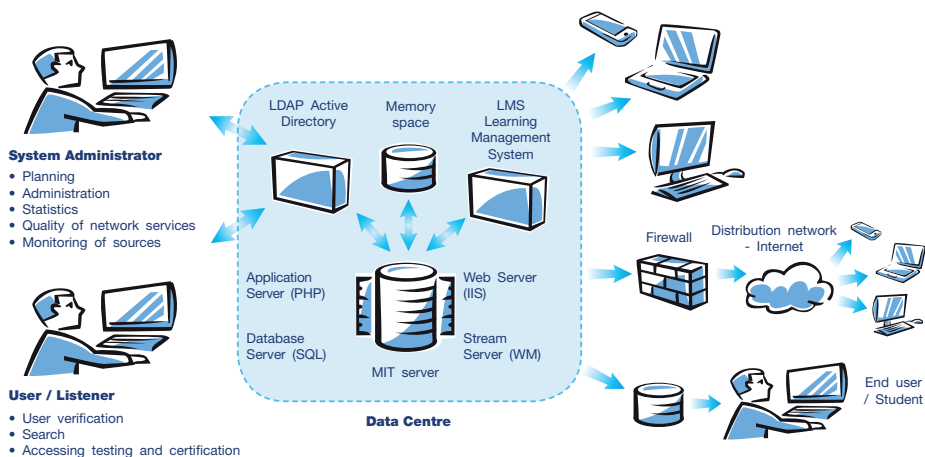
Of course, if you like the information on **EduArt** you must wonder how to handle all the recordings. You might have got your own content management system and we can offer our simple data storage mentioned above, and we shall be happy to talk about more sophisticated integration into your infrastructure. We also provide our own complete solution, the EduArt MediaInTouch, as illustrated at the next picture.

This administration is based on the philosophy of web editorial systems, adjusted to the needs of smart and individual structuring of the access rights to both publishing and publications, but also the requirements on the wide distribution channels. In each particular case, this is a challenge of its own and we shall be happy to answer questions and collaborate on complex solutions. Do not hesitate to contact us!



PolyMedia – Records Administration System

Media in Touch (MIT) Process Flow



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