

# Multimedia Centre at the University – a Provider of Modern Information Technology Based Services for Teaching and Research

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**Abstract:** *The main task of the Multimedia Centre is to assist academic staff in introducing and using modern information and communication technologies for teaching and research at the University. Functioning of the Centre, on the one hand ensures concentration and distribution of high-level know-how about using of modern technologies, and on the other hand allows saving of time and resources.*

## Introduction: Briefly about history of University of Tartu

University of Tartu was founded in 1632 by King Gustavus II Adolphus of Sweden as a classical university with four faculties and called Academia Dorpatensis. In 1802, after a hundred-year break, the University was reopened as Universitas Dorpatensis and in 1919 it was renamed Tartu Ülikool (University of Tartu).

Today the University's 11 faculties and 4 colleges incorporate 70 departments, institutes and clinics, and employ 120 professors. The 14 000 student population is made up of fulltime and open university students, and includes about 400 exchange students from other countries.

## Multimedia Centre at the University

### Objectives and activities of the centre

The centre of computer graphics and audio-visual services in the University of Tartu was founded in 1995. Classical "teaching aid" service for faculty members of the university used to (1) design and print either single or multiple copies of overhead transparencies, slides, photos course materials, handouts, etc; and (2) design illustrations for textbooks and articles. The audio-visual service offered lending, maintenance, repair and installation of audio-visual equipment and assistance with its use both in the classrooms and at the conferences, workshops, organised in the University.

In the early period the centre's task was geared to highlighting the University on various scientific conferences and technological fairs in Estonia and abroad. For this, large-format posters were designed and printed for presenting at scientific conferences and in advertisements of science. By 1997-1998 the centre had offset its development lag from the standards available.

Since its foundation, all work of the centre has been based on the use of modern information and communication technologies (ICT). Employees of the centre follow developments in these fields, and the scope of services they offer is widened in accordance with new ICT, provided the desired efficiency of teaching and research can be attained.

The main task of the Centre is to assist faculty members. The employees of the centre do not teach students on the regular basis. By early 2000, ISDN - network between university and its colleges

(in the Estonian cities of Narva, Türi and Pärnu), and other universities was established.

In 2000 the centre was renamed as Multimedia Centre and its objectives were expressed as follows: to assist in creating of virtual learning environment for both full-time and part-time students. The main tasks remained as they were before:

- To provide media services for teaching and research, using modern information and communication technologies
- To offer technical assistance for audio-, ISDN and video lectures, seminars, conferences, workshops, etc.

### Customers

About 50 -60 % of the orders for services are received from the faculty of medicine. The other faculties that actively use the centre's services include biology and geography, physics and chemistry, and exercise and sport sciences. The courses at these faculties can be taught more efficiently when different illustrative static or moving materials can be demonstrated to students in the classrooms. Less frequently are orders for media aid received from these faculties where much of teaching is based on classical lecturing.

The amount of the service ordered depends on the ICT skills of customers. Some people use only the technical possibilities provided by the centre, they themselves cope with all software problems. Some faculty members bring to the centre their handmade drafts of illustrations. In this case a computer file with its insertion into larger document will be ordered from graphic designers. Some customers come with their own computer files, which need additional retouch from graphic designers. All customers get consultations for solving their problems and performing their work more effectively.

### Benefits for the University

Benefits of the Multimedia Centre for the University may be summarised in three points. It allows:

- To save time and money
- To give professional outlook for advertisements of science
- To concentrate on and to distribute high-level know-how

Time saving is achieved by distributing the duties between the faculty members and academic support staff who compile and prepare materials, and the designers of the Multimedia Centre who contribute their designing skills, computers with necessary soft- and hardware, printing and finishing facilities. This distribution gives essential time saving to the academic staff, as there is now need for them to learn the finest peculiarities of designing software and to know possibilities of different poster-, paper- and slideprinters. For academic staff it is essential that work be done professionally and in time.

Designing process of the students' textbooks or illustrations for scientific presentations is a complex challenge for graphic designers as it requires accuracy and preciseness. There are very many different types of software and technical instruments, which can be

applied to produce drawings, graphs, etc. on paper or in files with different formats. Employees of the centre cope with the following tasks: choice of software best suitable for particular tasks, determining the complexity of design to make it acceptable for different printers, setting the optimal densities for scanning photos and choosing colour profiles needed for different printers in the Centre or in a publishing company. They also possess the valuable For achieving an eye striking results designers should put into their work also their artistic competence of design: layout of the illustration, poster, slide etc; balance between text and illustrations, types and sizes of fonts used, colour balance and so on. In all cases, results of using ICT as described above are determined by users' ability of applying the available soft- and hardware in the most effective way.

Several of our customers have won prizes for the content and professional design of their conference posters. One of our customers has written in her feedback: "Mine was the only large-format poster on the conference. It was very attractive and I hope that my citation index will duplicate in the following years". In this meaning activities of the centre may be regarded as a PR project for science and education.

Saving of funds will be possible as the concentration of expensive printing and audio - visual equipment allows guaranteed provision of top-level services with a wide range of different equipment. In addition, the Centre expedites professional service and more intensive use of the equipment, as technical resources can be utilised before they become out-dated. Professionals of audio-visual services also do consulting on media equipment and its installation for classrooms. This means that furnishing of all new and renovated classrooms of the university will be proceed from possibility to use in these rooms modern ICT. On the corresponding drawings they indicate lightening conditions of the rooms, position of the lecturer, the sizes of boards and screens in front of the room, distance of the first students' sitting line from the boards and placement of overhead- slide- and data-projectors.

The Multimedia Centre in the University with its services is a high-level know-how concentration and distribution centre. Concentration of the know-how proceeds in two ways: employees of the centre should know and learn the latest developments; and the academic staff visiting different universities and scientific conferences all across the world tell us about the latest development in the media services. All information received is analysed and proposed to use in the university to larger or smaller extent.

Introducing modern ICT into teaching process in the university, employees of the centre have observed that a teacher/mentor is in the central position of the teaching process and ICT is her or his supporting tool. Great personalities may be educated only through human interaction, by motivating learning, appreciating originality and elegance of solutions to proposed problems, comparing solutions offered by different students. To accomplish these tasks, the committed instructor desperately needs any technical ICT device.

## Price

"We recommend that the Funding Bodies, through the Joint Information Systems Committee, should continue to manage and fund, on a permanent basis, quality and cost-effective Communications and Information Technology services for researchers and should, in due course, introduce charges for services on a volume-of-usage basis."<sup>1</sup>

In the Multimedia Centre consultations are free of charge for university staff. Graphic design, artwork and technical assistance on AV as outreach services are charged on hourly basis. Printing and photographic services are charged on the quantity basis. The Centre provides all its outreach services at about 2 times marked up price.

<sup>1</sup> "Higher Education in the learning society" Summary Report of the National Committee of Inquiry into High Education, United Kingdom, 1997

## Now and Future

The core task of the Centre will remain the same for the years ahead: assistance to academic staff in using modern information and communication technologies. It is due to the fact, that as soon as we have finished arrangements for one application of ICT, the rapidly developing ICT will have raised new opportunities, which should be introduced for the purposes of everyday teaching and research in the university.

At the moment there are several essential tasks, which have to be handled:

- Printing of course texts on demand: textbooks for students and slides of the same material, overhead transparencies or PowerPoint presentation kit for instructors
- Introduction of CD production: we are ready to use MS PowerPoint and extensively learn Macromedia and related software
- Training of faculty members on user skills of ISDN videoconference facilities for distant instruction from Tartu to the colleges of the university elsewhere in Estonia.