University Study-Oriented System at Warsaw University

(from the European perspective)

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USOS at Polish Universities

- USOS is an integrated, university-wide Student Management Information System (SMIS)

- USOS development started as one of the activities of the Tempus Phare Joint European Project (November 1999–December 2001) sponsored partly by the European Union

- All (17) Polish universities had been involved in the Tempus project

- In 2002 Polish universities (14 out of 17) established a consortium (UCI: Uniwersyteckie Centrum ds. Informatyzacji) with a goal to further support system development and deployment

USOS at Polish Universities — cont.

- USOS in now actively used at:
  - University of Warsaw
  - Adam Mickiewicz University, Poznań
  - University of Silesia, Katowice
  - Cardinal Stefan Wyszyński University, Warsaw
  - University of Łódź

- USOS is now being deployed at:
  - Jagiellonian University, Kraków
  - Nicholas Copernicus University, Toruń
  - University of Białystok
  - University of Opole
  - Warmia and Masuria University, Olsztyn

- USOS may become a standard adopted by all higher education institutions in Poland, supported by the Ministry of National Education

USOS at Warsaw University

- USOS is being developed in-house by the Faculty of Mathematics, Computer Science, and Mechanics, Warsaw University

- Since 2001 it has been the only system for managing student affairs at Warsaw University supported by the university authorities

- USOS is deployed at all faculties but as yet most of them use it on the very limited scale (things however change rapidly ...)

- USOS delivers a broad range of functionality but faculties don't have to deploy them all. On the contrary, the deployment procedure may be tailored to local needs and priorities

- The deployment is controlled globally by a central unit dedicated to that task. In particular, all database dictionaries are defined globally. Unification of dictionaries, coding rules, and administration procedures employed at various faculties is regarded as an important part of system deployment

USOS from a global perspective

The main function of the system is to support organisation and administration of study programs at Polish universities in order to:

- integrate and standardize the information about students and their performance
- improve management practice
- ensure security of data and lower administration expenses
- introduce flexible study systems and flow of students between faculties
- support national and international mobility
- deliver statistical data to authorities (Dean, Rector, Minister of Education

USOS from a global perspective — cont.

General characteristics:

- **university-wide**: one global database for storing data concerning all organizational units of the university
- **flexible**: configurable, adaptable to programs and procedures of all participating universities; dealing with standard administration procedures but also accepting non-standard solutions
- **open**: easily adaptable to changes in study programs
- **secure**: supporting the multilevel hierarchical system of privileges
- **compatible with ECTS standards**
- **user-friendly**: coherent services offered to various groups of users, available through an easy and intuitive interface (especially important for users who are not professionals in Information Technology)

USOS architecture

- The system is built around a global database implemented in Oracle technology, which ensures effective handling of huge amounts of data accessed simultaneously from distributed client sites

- There are also separate internet databases (one per faculty). This part (called **USOSweb**) is implemented in open-source technology and can be integrated with departamental portals. Internet databases are partial copies of the main Oracle database: highly confidential personal data are not stored on the web, data are available mostly for reading, and modifiable data comprise only a small subset.

USOS architecture — cont.

Various groups of users access the system via various interfaces:

- **administration officers and university authorities** use a dedicated client interface (Oracle forms and reports) to get reliable and secure access to highly confidential data stored in the central database

- **students and teachers** use web browsers to get easy, but personalized and authorized access to personal data stored in Internet databases

- **the public (e.g. prospects)** use web browsers to get an easy and unlimited access to public information (e.g. on university program offer)

USOS — basic functionality

USOS supports handling of the following data and activities:

- students' and teachers' personal data
- study programs and requirements of degree certificates
- course catalog (complete list with details; some of them are persistent, like syllabus, prerequisites, credit points, others depend on course edition, like course instructors or weekly class schedule)
- course registration
- class schedules
- dormitories
- tuition, financial aid, scholarships
- issuing documents, gathering statistics, producing reports etc

USOS from the European perspective
Flexible study programs

- Requirements can be defined separately for each phase of study program, regular or cond. promotion, a specific diploma and degree

- Requirements may be defined on the basis of compulsory and selective courses, their number and selection can be determined freely

- Requirements may be composed not only for some predefined profiles but also for individual students and their dynamically built-in profiles

- USOS supports flexible requirements definition while simultaneously delivering automatic procedures for checking whether those requirements have been met. The automatic system decisions can be verified at each stage and updated by the operator

- On-line university course catalog and registration system allow students to build their profiles and enable interdisciplinary studies

USOS from the European perspective
Transparency

- Program and degree requirements are described on-line (for verification)

- Students have read access to all data on their study progress: grades, credit points, individual dean decisions etc.

- On-line course registration is supported by the system; students find all course information on the web, apply electronically for courses and classes; final lists of students enrolled for the course are also available on the web

- Students can contact course instructors electronically and find contact information on the web (e-mail, phone, office-hours, room number)

USOS from the European perspective
Transparency — cont.

- Automatically created group e-mail aliases for course attendants support group communication between students and instructors

- Excel-like on-line module gives students an immediate access to information on the assessment of course workload (homework, quizes, tests, exams) and suggests final grades on the basis of the predefined set of rules — known to everybody

- Exams for earlier course editions are archived and made available electronically

USOS from the European perspective
Comparability and mobility

- Program and diploma requirements are described in common terms
- ECTS is used to monitor students' progress
- Standardized system helps to unify organizational procedures
- The central university administration has access to global interdisciplinary statistics
- University-wide database supports flow of students between faculties
- Standardized system used across Poland supports students flow between universities

USOS from the EU perspective
Diploma Supplement

- Diploma supplement is a document established by the European Commission, Council of Europe and UNESCO/CEPES in order to improve the recognition of educational credential

- USOS module for Diploma supplement has been designed with the help of the Rector's plenipotentiary

- Two language versions are available: Polish and English

- The Diploma Supplement may only be delivered for a student who passed a diploma exam

USOS from the EU perspective
Diploma Supplement — cont.

The system is ready from the technical point of view. There is however a lot to be done from the organizational perspective:

- dictionaries have to be translated into English
- course catalog should be delivered in Polish and English
- study disciplines should be defined in both language versions
- all student's grades have to be available in the system — however now historical data is missing

Some details of the content of the diploma supplement are yet to be clarified and implemented (e.g. which courses and grades to show)

USOS from the European perspective
Quality

- Quality is obtained through transparency

- Many data are available on line, can be browsed, read, and verified. Course syllabuses help students choose courses based on their interests and quality criteria

- Course assessment module allows to gather students' opinion on courses

- New self-service mechanisms available remotely for students and teachers take care of some administrative tasks, resulting in shorter waiting lines in front of student offices and reduced paperwork.

- On the administration side the system improves management practices, reduces cost of administration processes and promotes business rules, e.g. by giving access to various statistical data which could support decision making by educational authorities

The End