Portal of Slovak universities – second phase

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1. EXECUTIVE SUMMARY

The paper deals with research project www.portalvs.sk, which is in its third year of development. All Slovak universities participate on this project in a way. In the paper we inform about the history of the project, about his current state as well as about future visions. The purpose of this project is to improve the conditions for a more effective use of the information technologies at universities.

The main aim of the project is to ensure the development of systematically ordered information about universities, which are guaranteed by people skilled in the area and creating an environment for the exchange of information as well as the educational products and systems offer. This aim is covered by already developed modules:

- **Information about universities** – In a form of bookmarks: information about the university, fields of study, universities entrance exams, etc.

- **IT development projects** – this will enable the project applicant to go through the entire process of the financial approval of the project online.

- **University News** – Publishing information from the university section – such as new publications, university Open days, interesting lectures and presentations, etc.

- **Conferences and seminars** – calendar of events.

- **E-learning** – a catalogue containing all available e-learning courses provided by universities.

The paper also presents innovations in these basic modules and also the conditions, which led to these innovations. We describe benefits and disadvantage of this kind of a global portal solution at the same time. Very important aim was added to the project this year. The key systems of Slovak universities should be integrated to the portalvs.sk. These key systems are:

- **Central student registry** – registry made by universities which consist of information's about all Slovak universities students.

- **Electronics university application form** – applicant to the university will have transparent and uniform way of enrolment to the universities. Also the university will have profit – quicker and effective enrolment process.

- **On-line interconnections portalVS.sk** – each Slovak university portal (XML).

- **Polls and discussion groups.**

- **Study abroad** – Socrates.

- **Publications evidence.**

2. HISTORY

Portal of Slovak universities was introduced to the Ministry of Education on 28th November 2006. Two month later also to the universities. For the better use of portal, many training and instruction materials were made and send to the universities. Also is available after the log-in to the relevant module.

Portal should be reached on the web site www.portalvs.sk. It consists of these already developed modules:

- Information about universities.
- IT development projects.
- Central student registry.
- Conferences and seminars.
- E-learning.
- University News.

3. AIMS, BENEFITS AND RISKS

The main aim of the project is to ensure the development of systematically ordered information about universities, which are guaranteed by people skilled in the area and creating an environment for the exchange of information as well as the universities key information systems integration.

Advantages

- Internet portal should be reached 24/7.
- Quick information acquirement from one place.
- Access to the central databases (accredited study programmes, database of universities, central student registry, etc.).
- Single sign-on, unified interface.
- Exchange formats between portal and universities – one input, multiple uses.
- Statistic's.
- Services improvement.
- User support – helpdesk.
- Solution fully accepted by Slovak law and order.
- Possible co-operation with public administration (e-government).

Risks

The biggest risk became from the side of universities – if they will not cooperate on the project, the information in the modules will not be representative. Therefore whole academics principalships and academics public need to be informed about existence of portal. Also helpdesk for users will be very useful in this case.

The realization time schedule should be risky – time laches will be the result of late financial resources allocation.

4. PROJECT FRAMEWORK

Figure 1 show lifetime cycle of a portal. We have chosen an incremental lifetime cycle. This way of creation reacts quickly on users' requirements, allows them to participate on solutions and finally, after finishing of every increment, together with experience, allows us to plan next increment even more precisely. Incremental access is for client – server architecture the most suitable due to modularity principle, which is the technology (and portal solutions mainly) based on.
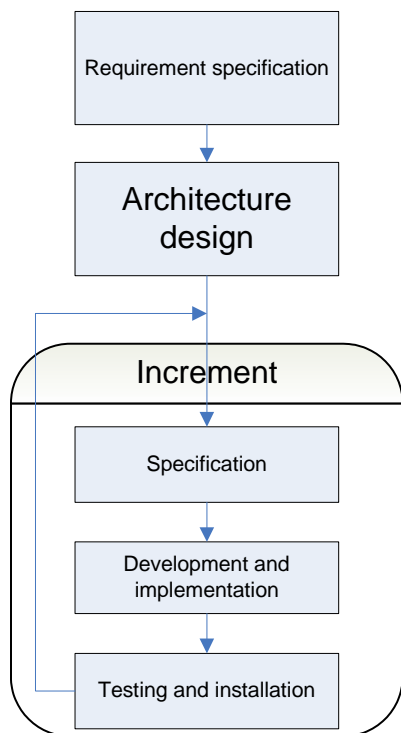
Figure 1: Lifetime cycle of Portal of Slovak universities

5.   PROJECT RANGE AND ENVIRONMENT (LINKS TO THE ANOTHER PROJECTS)

Academic environment is characterized by independent and its own opinions, as well as voluntariness. That's why it is not possible to force users to use the portal.
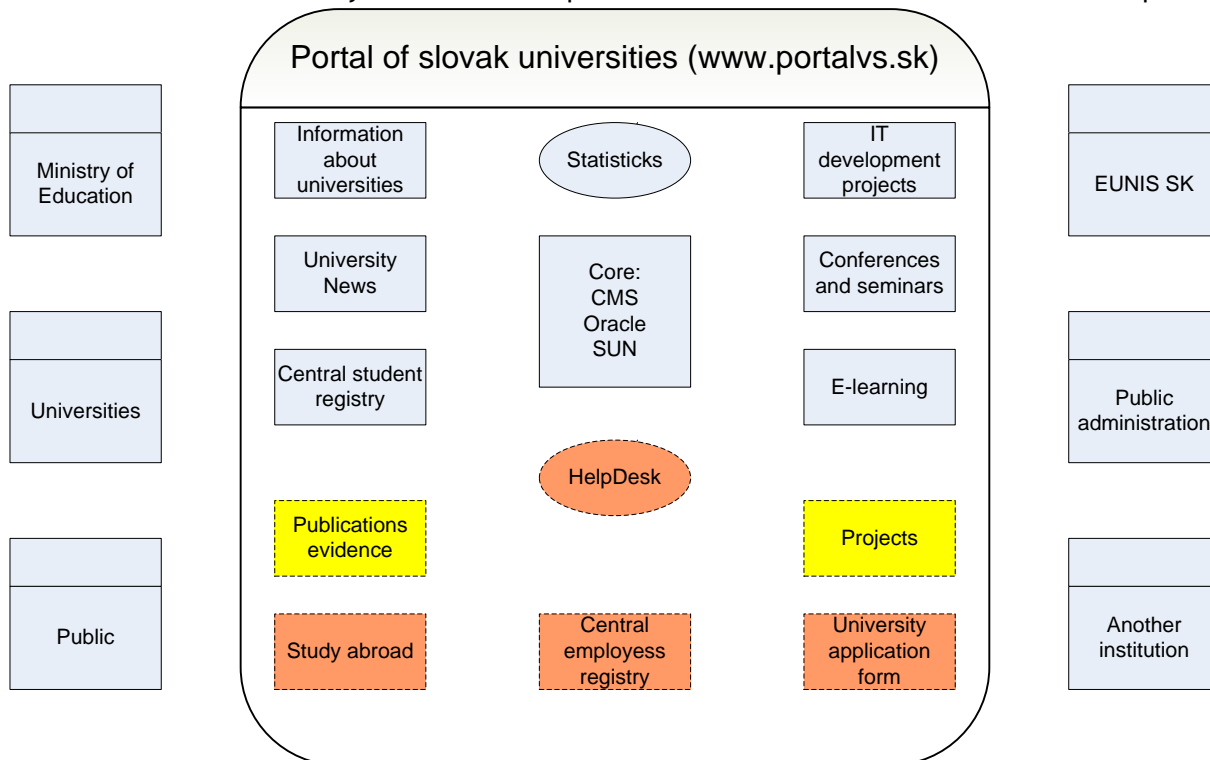

Figure 2: Project modules and environment

The only way to attract professionals and amateurs to use the portal is by its functions – provides services, information and their quality.

On the background of information and communication technologies possibilities analysis we figure out that many agendas should be simplified, interconnected and electronised. Centralization will bring unique maintenance and administration and many advantages for users of this systems (modules).

Figure 2 present the main agendas divided to the three groups, which is:

- Grey color – entities that were already developed, and will evolve or innovated. Module Central student registry is fully integrated to the portal, but it is still in developing process because of new demands from Ministry of Education and accreditation process. All grey color modules is under the full control of portal developing group.

- Yellow color - entities that were already developed but is not fully implemented to the portal (external applications). Because of possible needs in the future – portal should be the base information system in academics field – this entities need to be implemented to the portal (this year or later).

- Red color – entities that are not developed yet, but will be integrated to the portal in the near future. This module will be developed as stand-alone systems as first, and then some information will be integrated to the portal. Only helpdesk will be fully integrated to the portal, because will be used by all of the modules and users on the portal.

The base groups of users are listed also on the figure 2, around the portal. Due to size of this paper we will not define all links between the portal and other systems. Type of users and some functionality are mentioned above.

6. BRIEF CHARACTERISTICS OF PORTAL MODULES

Information about universities - Tab-module gives information about University, faculties and study programs of this University. Main accent is given on study programs. The main aim is to provide student attempting to study on University with complex, transparent, actual (data direct from University), guaranteed (UIPS) and in uniform structure available information about study possibilities. A content of the module is in accordance with „Ako na vysokú školu" manual, which is published by Ministry of Education. This module is the base module and it's fully working second year. All Slovak universities participate on this module in a way.

IT development projects - This module allows a client intending to submit a project, to fill-in and printout a project financing request that will be sent to project administrator of a given University (But also printed-out and signed due to verification need. In the future solved probably with e-signature.). Every project administrator has unique access belonging to one university only. Administration and evaluating project by Ministry of Education is also a part of this module. Projects valuation by the independent reviewers and more functionality will be added this year.

E-learning – a catalogue containing all available e-learning courses provided by universities. This module will be elaborated to the e-courses database (using Dublin Core metadata).

University News – Publishing information from the university section – such as new publications, university Open days, interesting lectures and presentations, etc. To prevention of duplicities, portal CMS will be interconnected with Ministry of Education system.

Conferences and seminars – calendar of events.

Central student registry – registry made by universities which consist of information's about all Slovak universities students and graduates, is fully working, but still missing some reports and will be remade for this reason.

Electronics university application form – applicant to the university will have transparent and uniform way of enrolment to the universities. Also the university will have profit – quicker and effective enrolment process.

Study abroad – Socrates and another mobility of students, teachers and academics staff – interconnection with mobility portal (which is in the phase of analysis in this time – June 2008).

7.   TECHNICAL INFRASTRUCTURE

Because of central electronic application to the universities and also because of huge amount and importance of data concentrated on the portal, there is need to have two geographically (and physically also) separated data centers. These will be interconnected in the mean of geo-cluster. More information about the used solution should be found in the figure 3. The base objective of this kind of solution is automatics cross-over of application to the secondary server in the case of primary server failure.
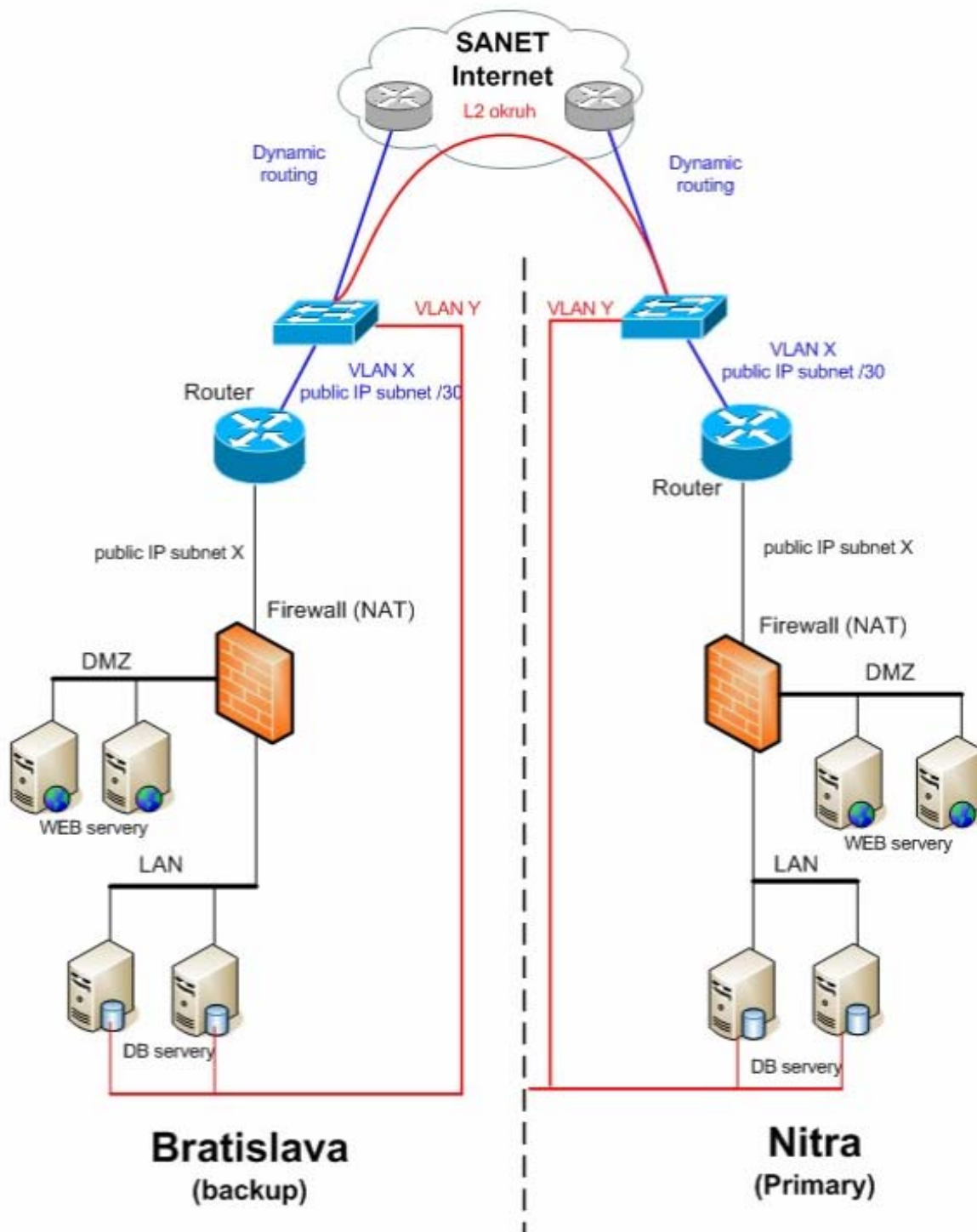

Figure 3: Portal data centers

8.   ACTUAL STATISTICS AND PLANED MODULES

One of the main objectives this year will be improvement of exchange data format. Information need to be inserted just once (on the portal) and than multiple used (on the web pages of the universities, which have some interconnection to the data). This demand is accepted because of used CMS and data structure. This will be the big gain of portal.

Also the electronic application form will be important. This type of application to the universities will bring possibilities to use many type of databases – school leaving examination results, personal information about students, about universities and many more – and also possibilities to application to the two or more universities by filling the information just once. Last phase will use electronic signature.

This electronics application form will be used on the all of the universities (private, public and state). The universities witch already used some type of electronic application, will communicate with portal by the XML. Deep impact will have this kind of centralized application on the universities, which didn't use the modern academics information system – these will use the application on the portal. So, there will be no discrimination to the applicant – electronic application will be available to the all Slovak universities and to the all of study programs.

Another part of portal will allow some communication between the users – regular polls and controlled discussion groups. This will improve the communication in the academics field and also the knowledge exchange.

Nowadays eighteen public universities and twelve private universities is active (creators of content) involved in this project.

| 427 | 2 405 | 8 563 | 3 487 | 5 916 | 7 401 | 4 063 | 4 659 | 9 524 | 10 178 | 10 620 | 3 563 |
| Jan | Feb | Mar | Apr | Máj | Jún | Júl | Aug | Sept | Okt | Nov | Dec |

Figure 4: Number of visitor on to the portalvs.sk during the year 2007

9.   CONCLUSION

In the future portal should satisfy the following aims:

1.   Complex information system about universities and education on the universities.

2.   Possibility of electronic application to university.

3.   Support for pedagogical worker for the best methods and pedagogical tools selection.

4.   Lifetime education of university employees' support.

5.   Support of academic employers and researchers by looking for possible co-operation partners, as well as review acquisition about problems solved in SR and abroad.

6.   Electronic data exchange with European Union

7.   Effective communication canal between state authorities and universities.

To be able to achieve above mentioned aims, a large amount of services needs to be implemented to the portal. It means noticeable technological severity and the need for personal and financial resources. That's why further realization needs to be done in consecutive steps. A different way would be complicated and capital-intensive. But chosen lifetime cycle allows this kind of progress.

The Document named as "Strategy of informatisation of society in Slovak republic" leads in: "Informatisation of society presents long-time and all-society movements, which successful execution involves creating of the appropriate all-society conditions. Just the effective coordination

of all concerned subjects in conditions of all-society level can guide to a significant informatics movement, as Slovak republic had contracted in program eEurope+ and others activities."

Portal of universities accomplish these ideas, generate right conditions for process informatics increase. Developers of the project seek to integration of central activities. It means to provide for students, post-graduate students, university employees, applicants for university study and also to others portal visitors, an access to information and activities from one point.

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