

Introduction to Planning and Building of E-campus of Your Institution

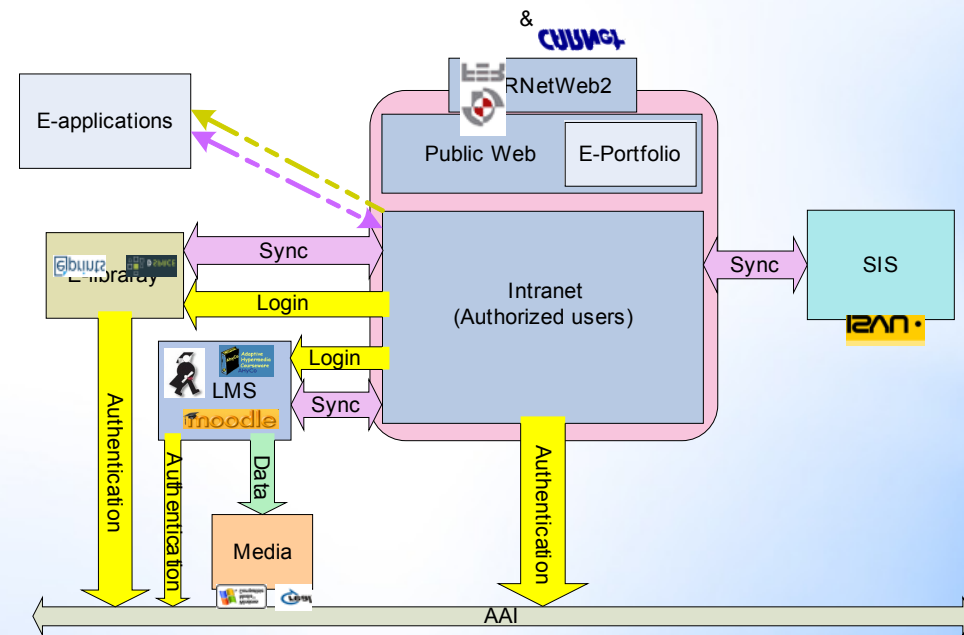
Siniša Tomić, Kristijan Zimmer, Ivan Voras
FERWeb team
Faculty of Electrical Engineering and Computing
University of Zagreb

What is E-Campus?

- ▶ Complete integration of all information, learning and collaboration resources

- ▶ Content management system
- ▶ Student information system
- ▶ Learning management system
- ▶ E-Library
- ▶ E-Portfolio
- ▶ Other E-applications

- ▶ Technical requirement for quality of education



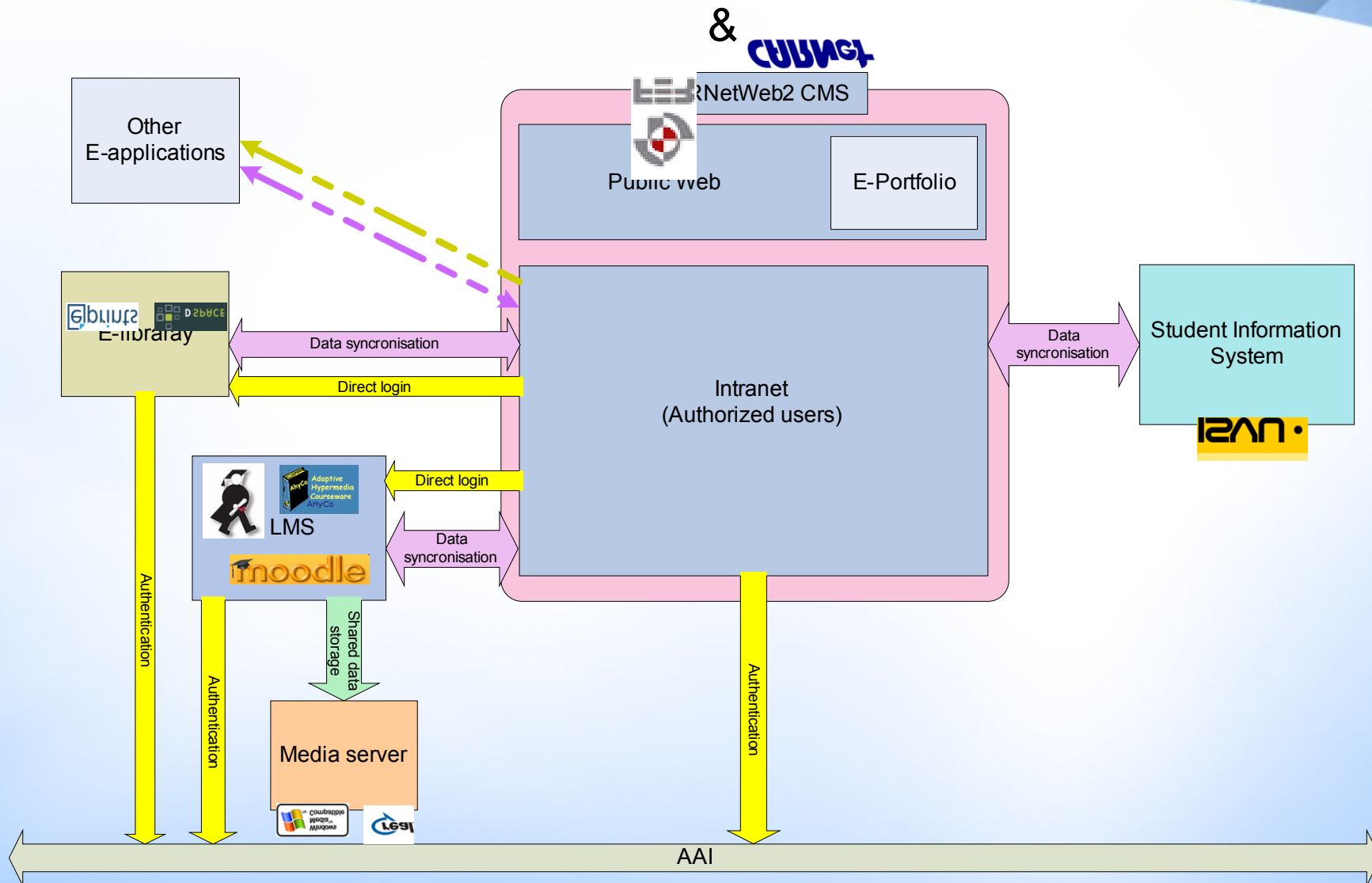
What is E-Campus not?

- ▶ Socially
 - ▶ Replacement for teachers
 - ▶ Solution for people that don't have enough time to attend classes
- ▶ Technically
 - ▶ Simple web application
- ▶ Strategically
 - ▶ Current trend that will pass if I ignore it

Do I need E-Campus?

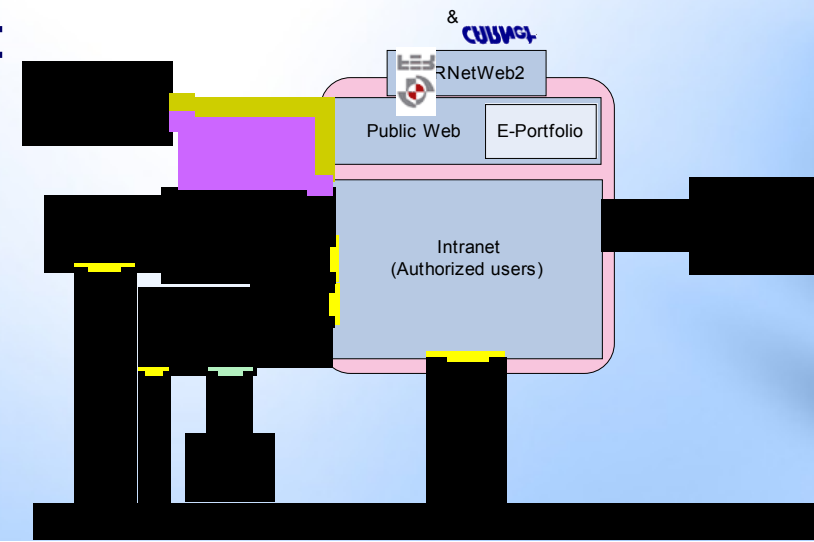
- ▶ Is this what happens in your institution nowadays?
 - ▶ Hard to inform and teach so many students
 - ▶ Hard to keep track of their progress
 - ▶ Hard to keep track of their questions, repeat the same answers
 - ▶ Hard to test and grade them
 - ▶ Learning materials are in different places, students are confused
 - ▶ Teachers distribute materials using different channels: via numerous web sites, via e-mail, on CDs...
 - ▶ Fast Internet is available, but students seem to use it for P2P instead of learning-centered activities
- ▶ Maybe your institutional strategy might include... **E-Campus!**

E-campus @ FER



Content management system

- ▶ Our own “CARNetWeb2 CMS”
- ▶ Online editing
 - ▶ Content
 - ▶ News
 - ▶ File and link repository
 - ▶ Polls and advanced surveys
 - ▶ FAQs
 - ▶ Other communication-related modules:
forum, chat...
- ▶ Central part of E-Campus



Naslov:

Sličica uz sažetak:

Feed me! 

Klik na sliku vodi na (☐ u novom prozoru):

☐ Ništa
☒ Tekst vijesti
☐ Vanjski URL:

Sažetak:



One of new features for CARNetWeb2CMS is its ability to export its information through RSS feeds. That includes News, Forums, File repository, Link repository and Today on FER. It can also authenticate users and allow access to Intranet

News

Naslov: _____

Editing content

Sadržaj: _____

It's easy to edit content if you have powerfull but simple content editor. You can edit content simply by clicking on the text|

Otkazi/Povratak Zapiši izmjene

Content

Moodle stranice kolegija:
Digitalna logika

Prijava	Studenti	Nastavnici	Pomoć	Kontakt	Moj Moodle	GOD
---------	----------	------------	-------	---------	------------	-----

Što želite raditi na sustavu:

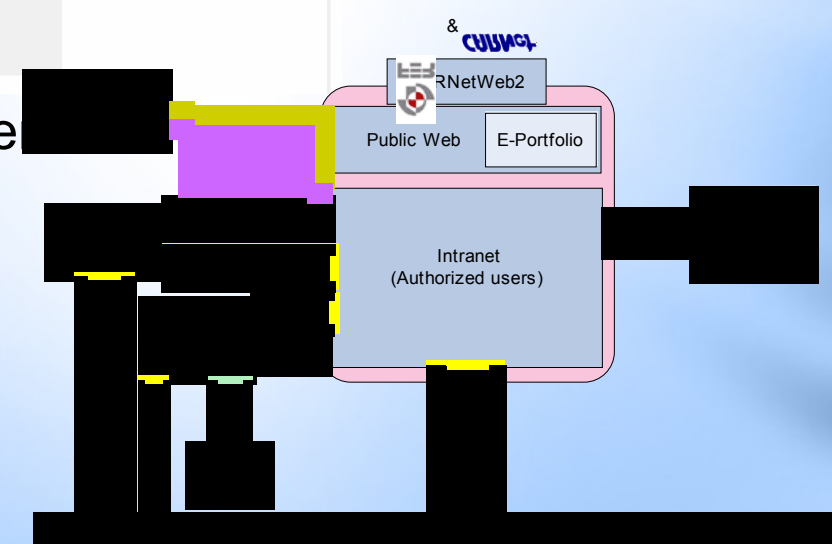
- držanje kolegija
- pregledavanje rezultata
- rad sa studentima
- komunikacija sa studentima
- ...

Započni

- izrada materijala
- izmjena materijala

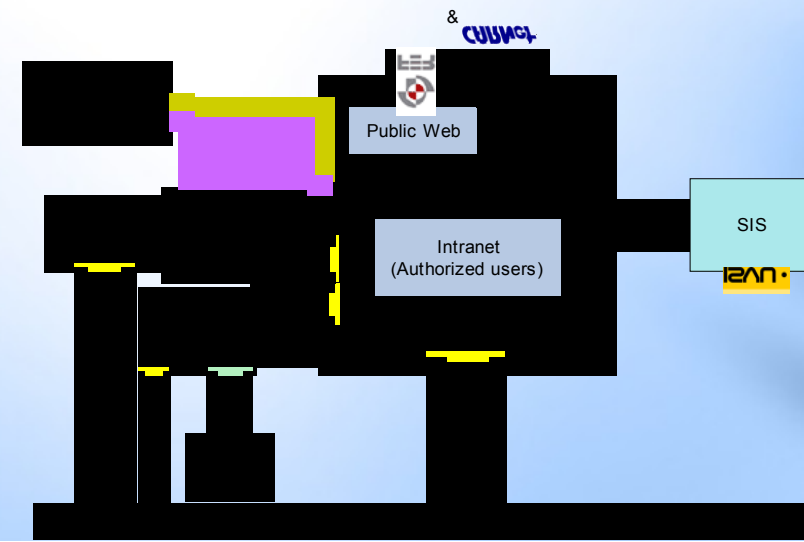
Započni

E-Learning manage



Student information system (SIS)

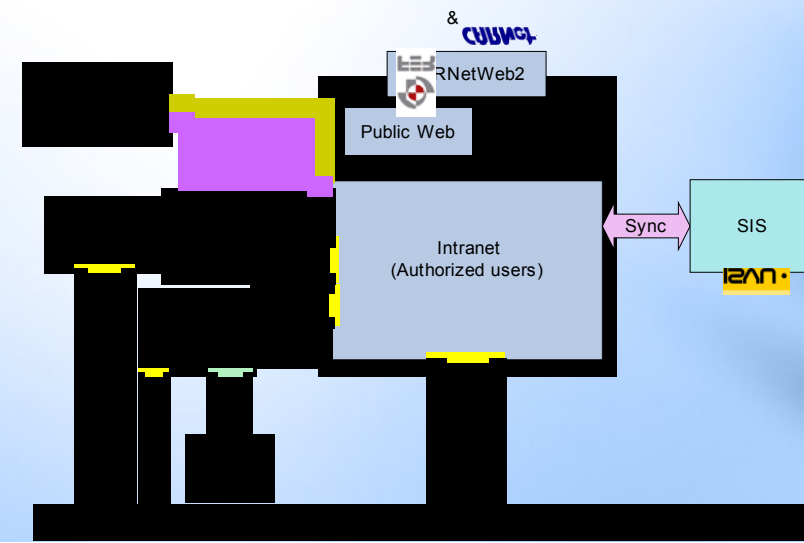
- ▶ “ISVU” - Information System of Higher Education Institutions
- ▶ Provides E-campus with:
 - ▶ Course information
 - ▶ List of teaching staff
 - ▶ List of students
 - ▶ Enrolment details



Connecting to SIS

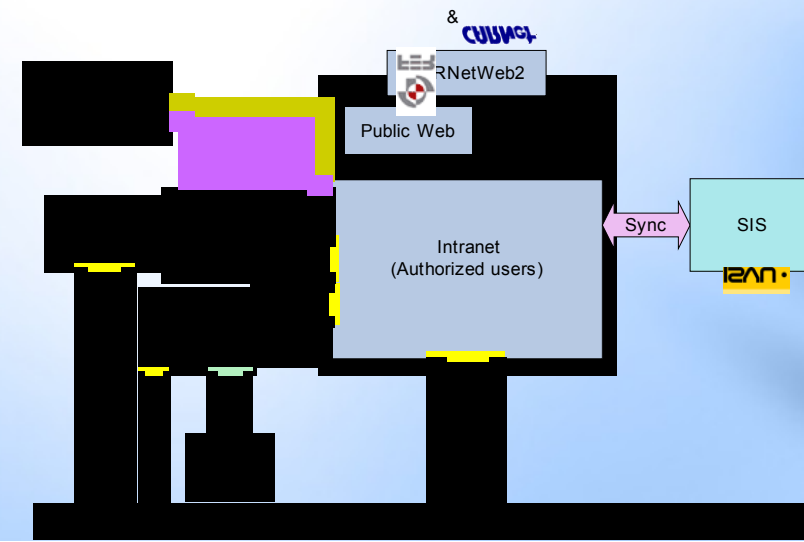
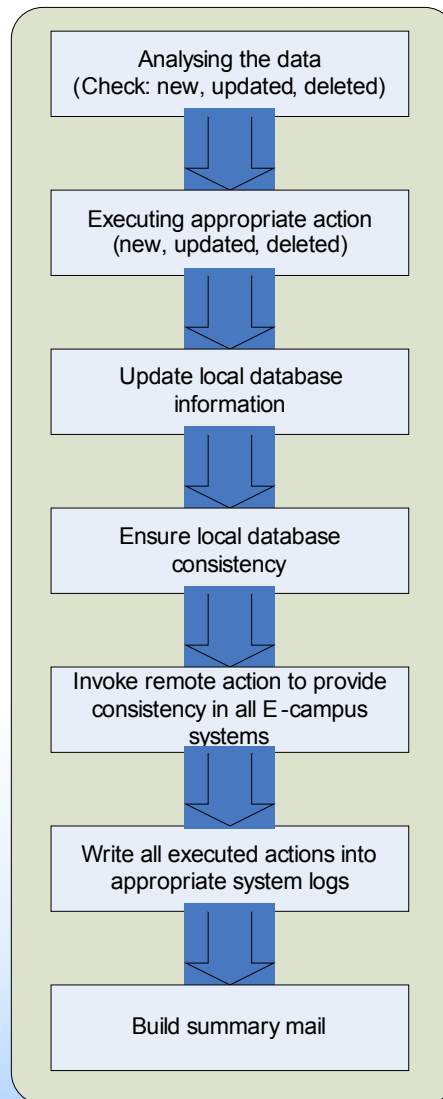
- ▶ Established format:
 - ▶ XML data
 - ▶ Data received from SIS is adapted for all other systems that may require it
 - ▶ CARNetWeb2 CMS notifies all other parts of E-campus about changes in status of:
 - ▶ Students
 - ▶ Teaching staff
 - ▶ Courses

<>jezik
<>akGodina
<>visokoUciliste
<>sifVU
<>nazOrgJed
<>nazivSveucilista
<>adresa
<>telefon
<>oznDrzava
<>postOzn
<>nazMjesto
<>ulicaBr
<>emailOrgJed
<>urlOrgJed
<>studenti
<>student [*]
<>jmbag
<>osoba
<>ime
<>prezime
<>spol
<>datumRodjenja
<>upisanaGodina
<>nasGodUpisana
<>upisaniSmjerovi
<>smjer [*]
<>sifSmjer
<>upisaniPredmeti
<>sifPred [*]

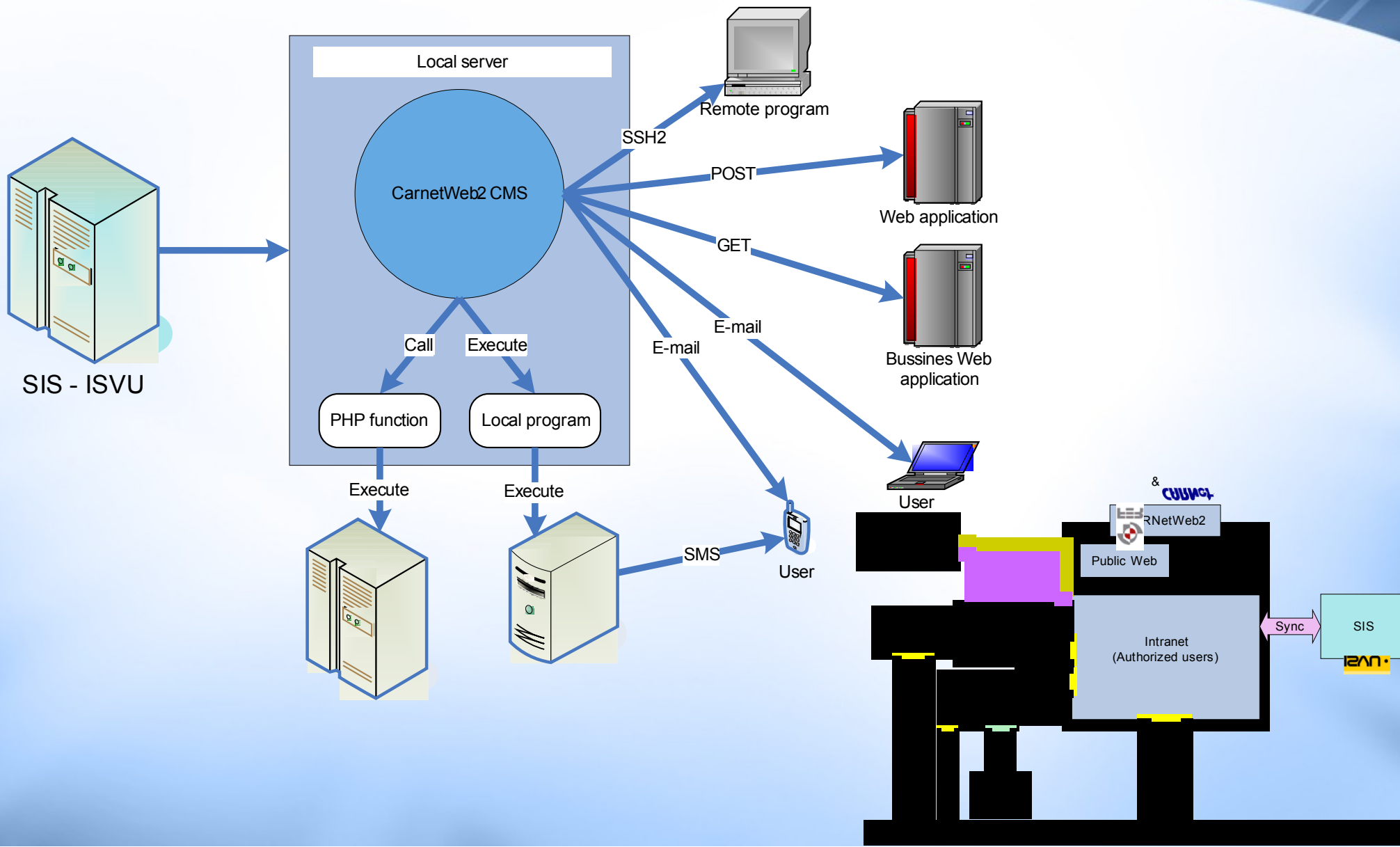


Automated SIS synchronization

- CMS compares new data and:
 - Stores it into local database
 - Tracks changes
 - Notifies other systems

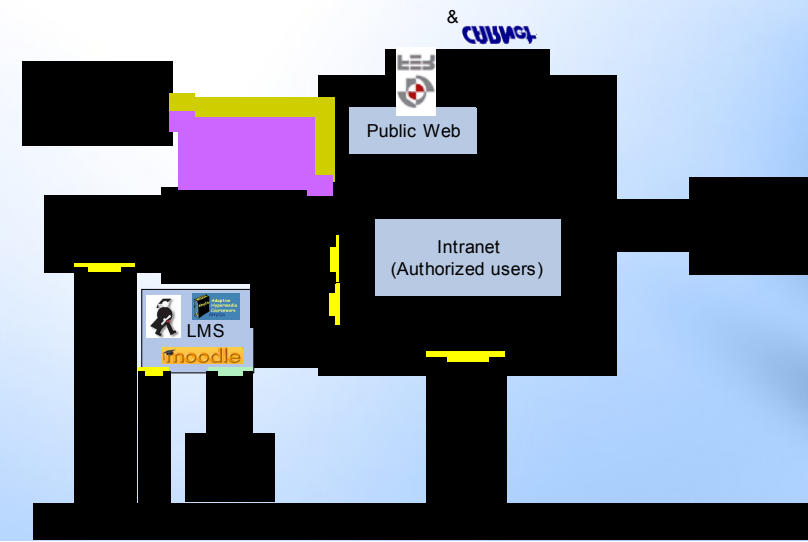


SIS→CMS→other systems notification



Learning management systems

- ▶ LMS provides integrated learning environment
- ▶ We are currently supporting integration with three advanced Learning management systems:
 - ▶ Moodle
 - ▶ AHyCo
 - ▶ WebCT
- ▶ Teaching staff can select most appropriate tool for their teaching style



Available functionalities of LMSs

FER sveučilište u zagrebu
fakultet elektrotehnike i računarstva

You are logged in as Admin User (Logout)

FER-Moodle » Administration » Configuration » Modules

Modules

Activity module	Activities	Version	Hide/Show	Delete	Settings
Assignment	1	2005060100		Delete	Settings
Chat	0	2005031000		Delete	Settings
Choice	0	2005041500		Delete	
Forum	32	2005042600			Settings
Glossary	0	2005041900		Delete	Settings
Hot Potatoes Quiz	0	2005031418		Delete	
Journal	0	2005041100		Delete	
Label	0	2004111200		Delete	
Lesson	0	2005060900		Delete	
Quiz	79	2005060300		Delete	Settings
Resource	132	2005041100		Delete	Settings
SCORM	0	2005052200		Delete	Settings
Survey	5	2005031600		Delete	
Wiki	0	2005031000		Delete	
Workshop	0	2005041200		Delete	

Moodle

WebCT myWebCT Nastavak tečaja Karta tečaja Provjera preglednika Odjava Pomoć

Upravljačka ploča Otvoreno računarstvo

Pregled Uređivanje

Nastavnikovi linkovi Početna stranica > Proširena upravljačka ploča

Proširena upravljačka ploča Osnovna upravljačka ploča

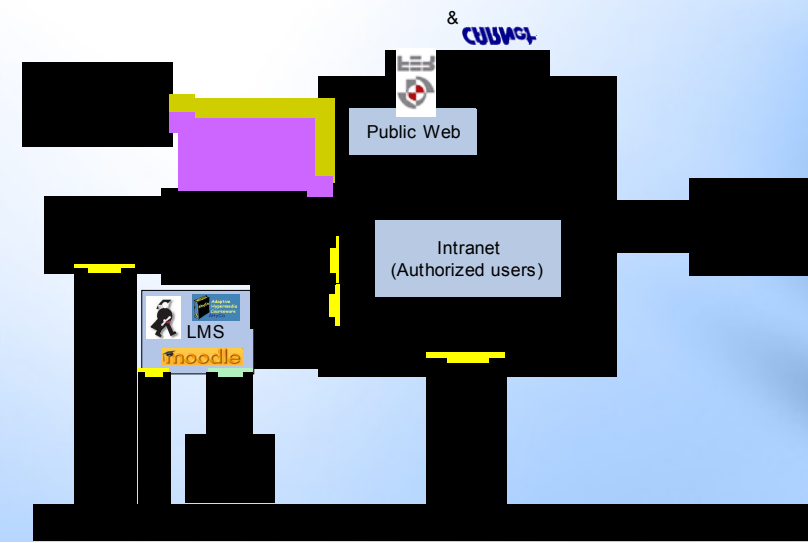
Dodavanje stranice ili alata	Uređivanje stranice ili alata	Upravljanje datotekama	Upravljanje tečajem	Postavke tečaja
Baza slika	Ažuriranje polaznikovog pogleda modula sadržaja u tečaju.	Učitavanje	Upravljanje polaznicima	Ime nastavnika
Čavrljanje	Ažuriranje polaznikovog pregleda	Izrada	Praćenje polaznika	Jezik
CD-ROM		Uređivanje	Upravljanje nastavnim asistentima	Format brojevnih podataka
Crtača ploča		Kopiranje	Praćenje stranica	Format prikaza vremena
Forum	Početna stranica	Premještanje	Sigurnosna kopija tečaja	Prikaz izbornika tečaja
Ispiti/ankete	Kalendar	Promjena imena	Vraćanje tečaja na početak	Nastavnikova početna stranica
Izbornik jezika	Čavrljanje	Brisanje	Unos sadržaja	Nastavnikovi linkovi
Jedna stranica	Moduli sadržaja	Sažimanje	Iznošenje sadržaja	
Kalendar	Forum	Ražirivanje		Uređivanje izbornika tečaja
Kazalo	Pošta	Preuzimanje		Uređivanje stranice dobrodošlice
Modul sadržaja	Organizacijske stranice	Pretvorba znakovnog skupa		Prilagodba boja tečaja
Moj napredak	Ispiti/ankete			Prilagodba/dodavanje slike pozadine
Moje ocjene	Pojedinačne stranice			Prilagodba stila sličice
Nastavak tečaja	Polaznikove početne stranice			Zamjena pojedinačne sličice
Nastavni program	Polaznikova izlaganja			Podršavanje novosti o tečaju
Organizacijska stranica	Crtača ploča			
Polaznikova izlaganja				
Polaznikove početne stranice				
Pošta				
Pretraga				
Prilagodba za ispis				
Radni zadaci				
Rječnik				
Samoispitivanje				
Savjeti polazniku				
URL				

WebCT

► Since May 2005:

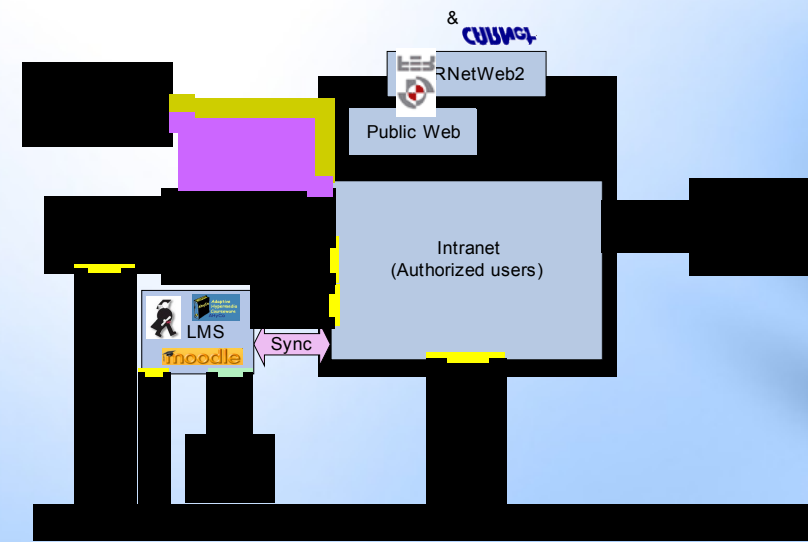
FERWeb team =  developers

Joint effort with  developers

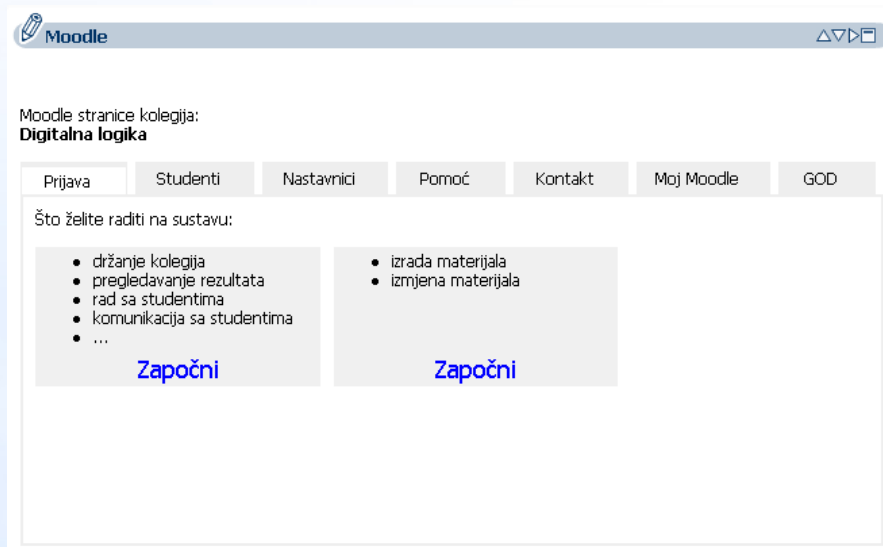


CMS – LMS integration

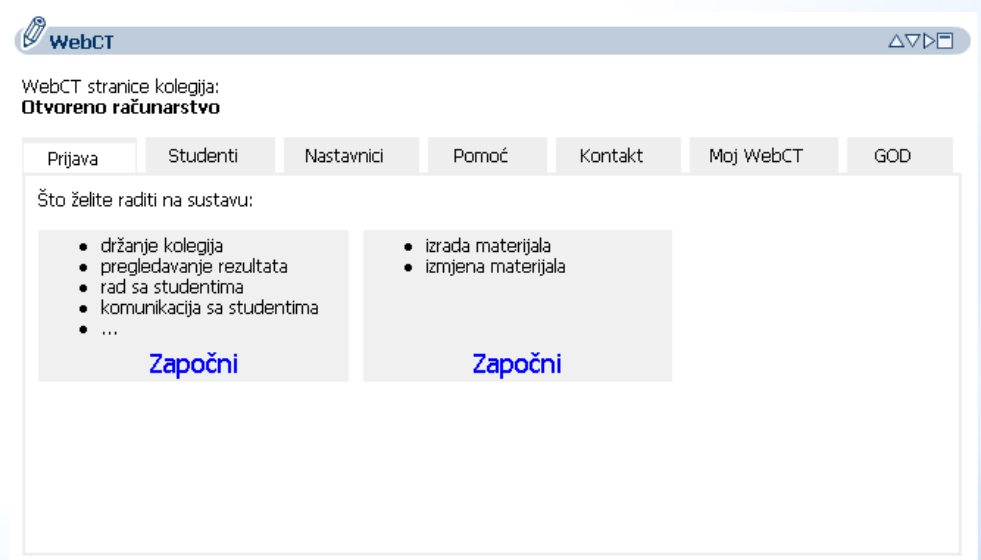
- ▶ Implemented standard:
 - ▶ IMS (<http://www.imsproject.org/>)
 - ▶ XML based
- ▶ Direct login into course from CARNetWeb2 CMS
- ▶ Simple, yet powerful administration from CMS:
 - ▶ Import of student-related data
 - ▶ Administration of teaching staff
 - ▶ Automated creation of new courses
- ▶ Data synchronization
 - ▶ Quiz results and grades retrieval from LMS to CMS



Comparing administration tools



Moodle

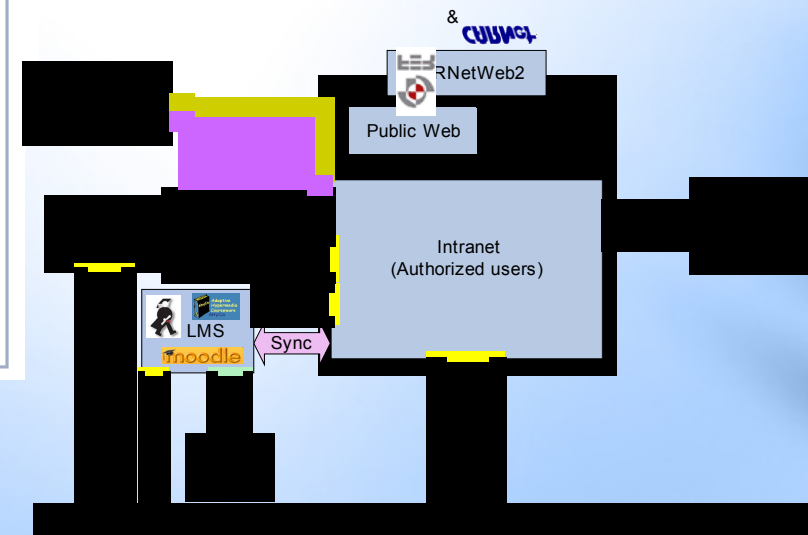


WebCT

Administration of LMS

Login Students Teaching staff Help Contact

The screenshot shows the AHyCo web interface. On the left is a sidebar menu with items like 'Prjaja', 'Na Mo', 'Sti', 'Sti', 'M', and 'Do'. The main content area has a header with 'AHyCo' and a navigation bar with 'Prijava', 'Studenti', 'Nastavnici', 'Pomoć', 'Kontakt', and 'Moj AHyCo'. Below the navigation bar is a text box for submitting a question, with a 'Pošalji pitanje' button. A note at the bottom states: 'Napomena: Ne trebate upisivati vaše osobne podatke ili podatke o kolegiju jer će oni biti automatski ispunjeni.'



Providing support

Subject: [WebCT - FER] Otvoreno računarstvo

Course : Otvoreno racunarstvo
Title : dipl.inz.
Person : Kristijan Zimmer
Email : kristijan.zimmer@fer.hr
Status : Asistent (FER) / Asistent (WebCT)
Department : Centar za informacijsku podrsku
Phone : 160

Question

How can I backup my course?

INFO

====

FERWeb

Login : kzimmer
Person : Kristijan Zimmer
Name : Kristijan Zimmer
Course : <http://www.fer.hr/predmet/347>
Primary : Mario Zagar

WebCT

Login : kzimmer.fer
WebCT ID : FER_KZ01
Course ID : FER_ZRS12A2
Term : Summer (2 - 1478980832)



WebCT



WebCT stranice kolegija:
Otvoreno računarstvo

Prijava

Studenti

Nastavnici

Pomoć

Kontakt

Moj WebCT

GOD

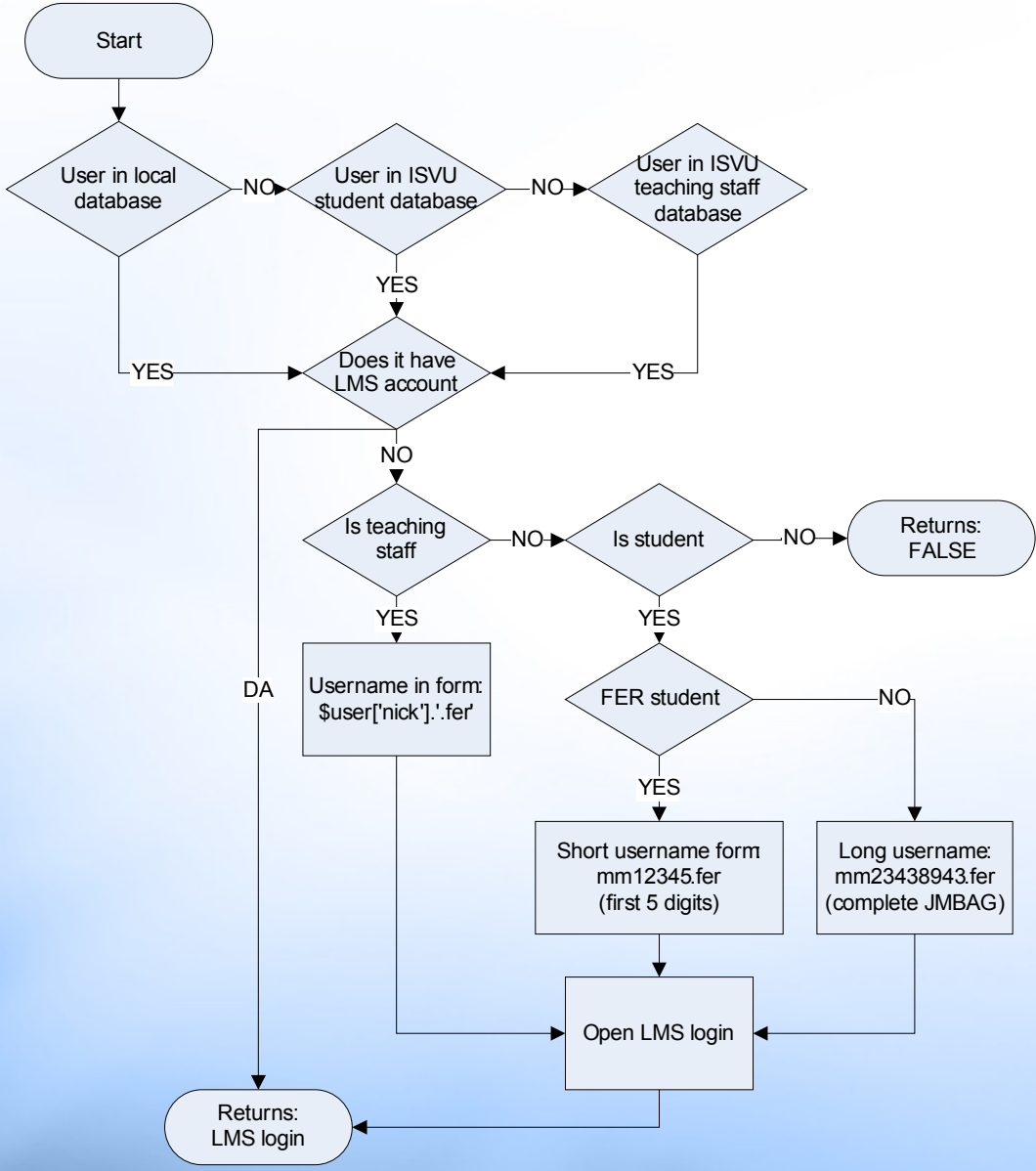
Ako imate bilo kakvih problema ili pitanja u vezi rada WebCT-a ispunite polje s vašim pitanjem i odaberite "Pošalji pitanje". Pitanje će biti poslano tehničkoj podršci za WebCT. Odgovor na vaše pitanje dobit ćete putem e-maila na vašu mail adresu: **kristijan.zimmer@fer.hr**

How can I backup my course?

Pošalji pitanje

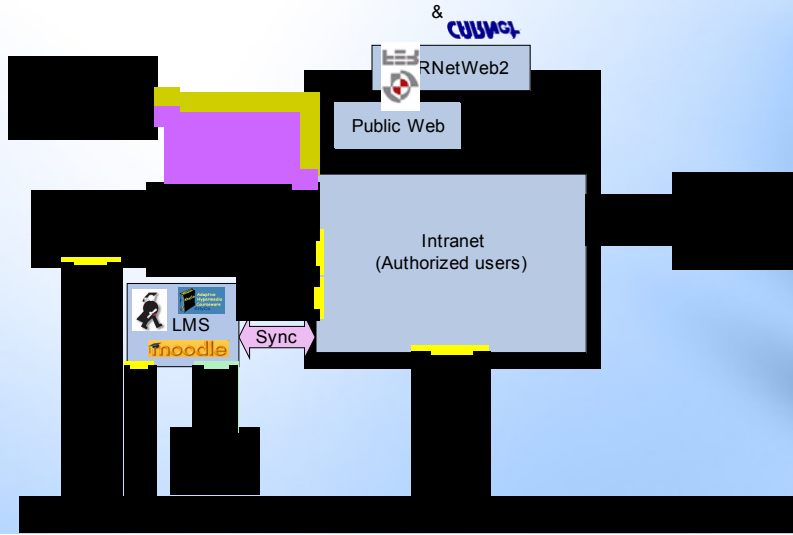
Napomena: Ne trebate upisivati vaše osobne podatke ili podatke o kolegiju jer će oni biti automatski ispunjeni.

Received e-mail



► How to open an LMS user account

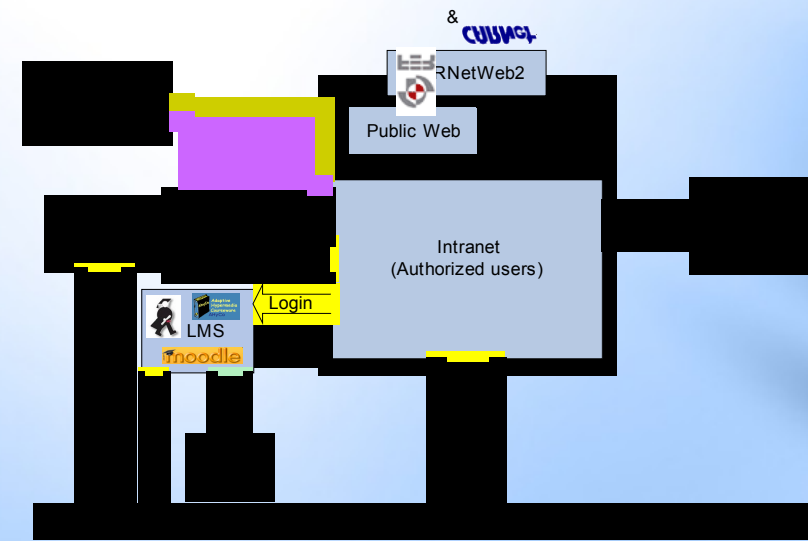
- ▶ Check if user already exists
- ▶ Check type of user
- ▶ Choose correct username (AAI)



Direct login from CMS to LMS

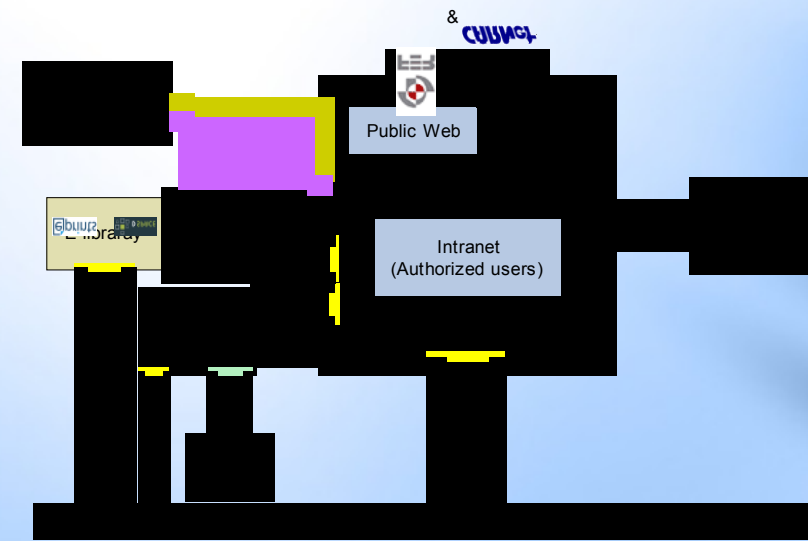
- ▶ Never sends password
 - ▶ Checks digital signature instead
 - ▶ MD5
 - ▶ Digitally signs:
 - ▶ User login
 - ▶ Course ID
 - ▶ Current time
 - ▶ Additional information
- ▶ NTP synchronization

http://webct.carnet.hr/webct/public/autosignon?URL=courseid%3A%2F%2FFER_ZRS12A2&Time+Stamp=1130604853&IMS+id=FER_0036377354&MAC=A1838FACDE194360A0A52C4080BB7D91



E-library

- ▶ We are still testing and deciding
 - ▶ EPrints
 - ▶ School of Electronics and Computer Science, University of Southampton, UK
 - ▶ DSpace
 - ▶ Massachusetts Institute of Technology
 - ▶ Hewlett-Packard Company
- ▶ Open source based solution



E-portfolio

- ▶ Implemented as CARNetWeb2 CMS module
- ▶ Automatically generated upon user account creation
- ▶ User chooses what to present:
 - ▶ Contact information
 - ▶ Curriculum vitae
 - ▶ Published papers and books
 - ▶ Grades
 - ▶ Students
 - ▶ Courses
 - ▶ Students
 - ▶ Teaching staff
 - ▶ Awards
 - ▶ Membership
 - ▶ Interests

Address: <http://www.fer.hr/mladen.kos>

>> /mladen.kos

 Ispis podataka za djelatnike

Prof.dr.sc. Mladen Kos

Zvanje: Redoviti profesor
Funkcija: Dekan FER-a
Diplomirao: 1972
Magistrirao: 1976
Doktorirao: 1983
Soba: C08-17
Telefon direktni: (01) 6129-863
 (01) 6129-836
 (01) 6129-794
Telefon kućni: 363
 336
 294
E-mail: [Email](#)
Zavod/Služba: Zavod za telekomunikacije
Adresa: Unska 3, 10000 Zagreb, Hrvatska

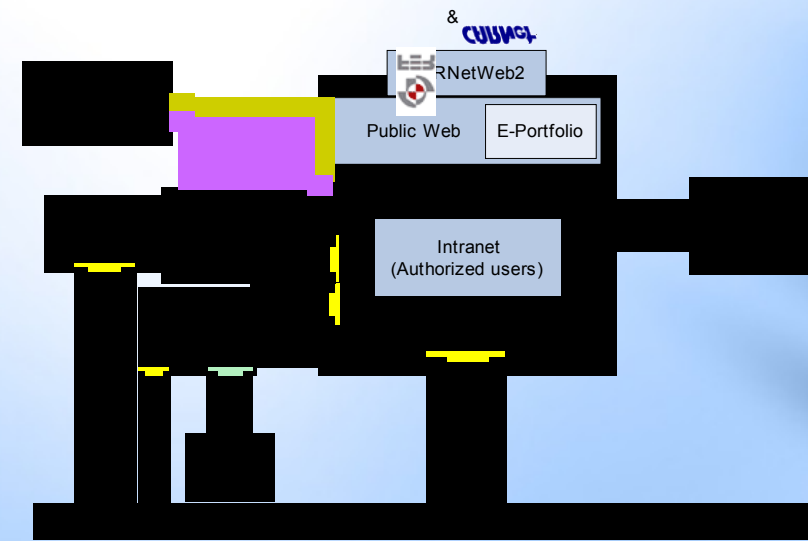


[Skraćeni prikaz](#)

Životopis
 Rođen je 1949. godine u Varaždinu gdje je završio osnovnu školu i gimnaziju. Diplomirao je 1972., magistrirao 1976., a doktorirao 1983. sve na Elektrotehničkom fakultetu u Zagrebu. Redoviti je profesor na Zavodu za telekomunikacije FER-a. Godine 1995. utemeljio je Laboratorij za napredne telekomunikacijske studije (LATS). Dobitnik je srebrne plakete "Josip Lončar" (1976). Član je strukovnih društava IEEE i INFORMS, te član Programskih odbora brojnih domaćih i inozemnih konferencija.

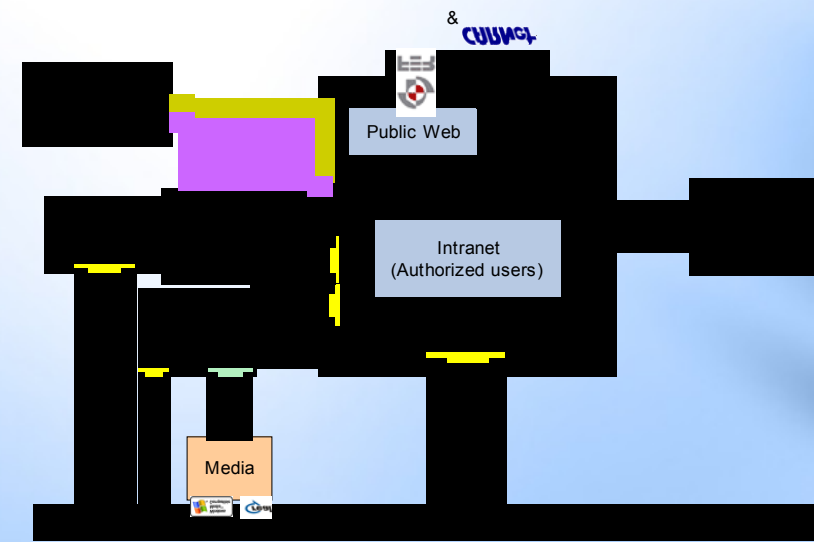
Nastava

- Teorija informacija
- Telekomunikacijske mreže
- Teorija prometa
- Algoritmi i metode optimizacije / Optimizacija u telekomunikacijama
- Lokalna i pristupna mreža / Širokopoljske mreže

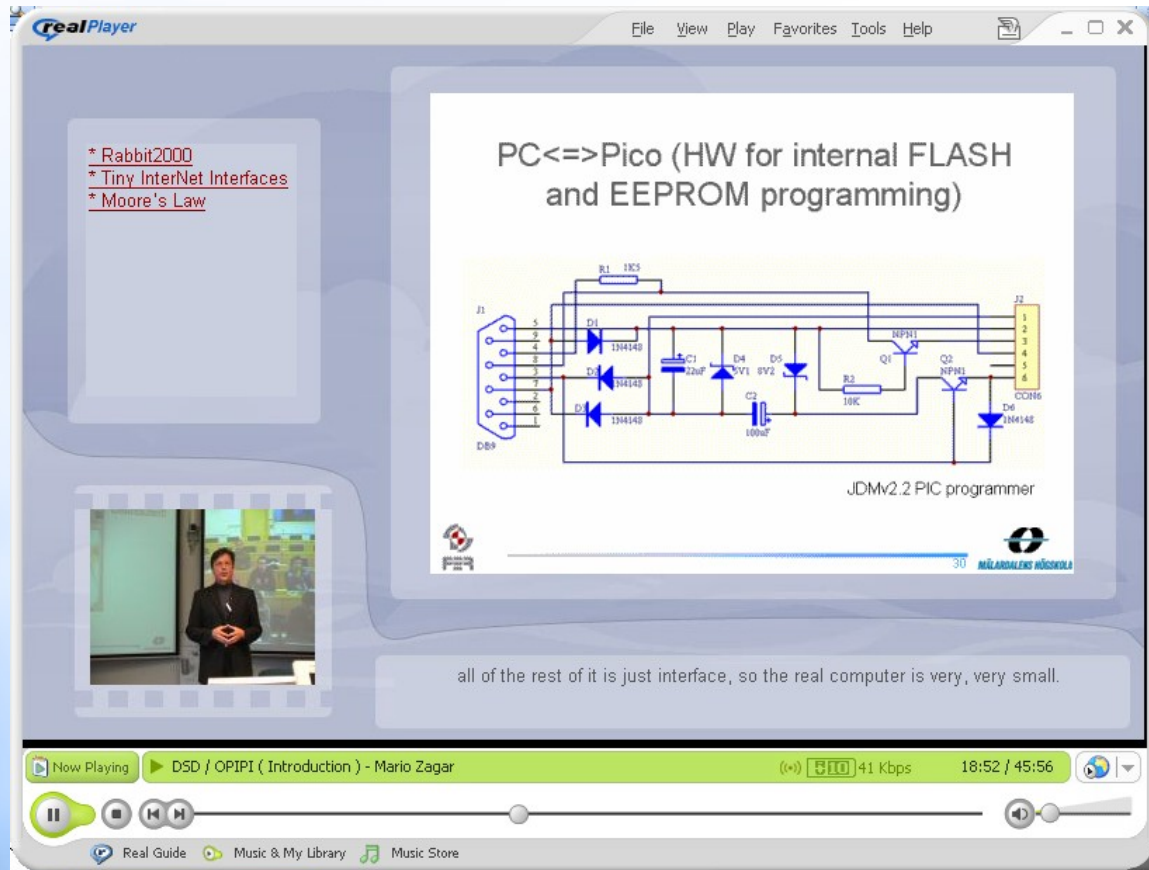


Media server

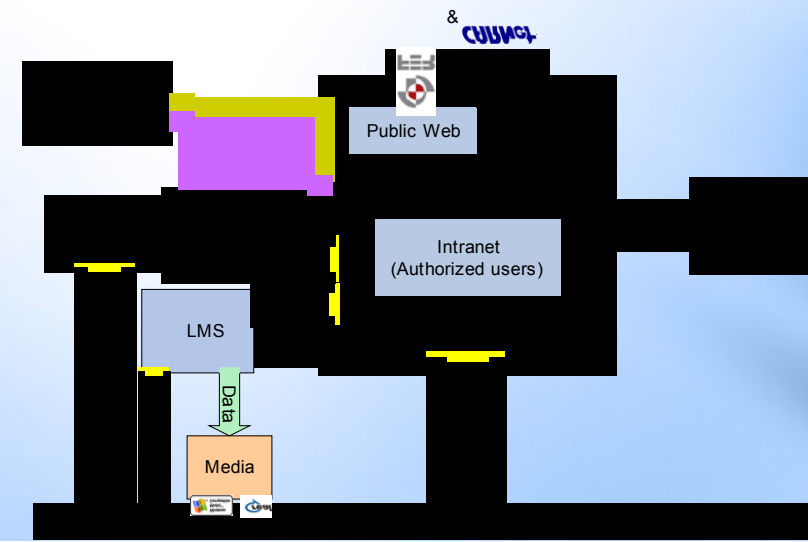
- ▶ Stores and delivers all streaming video and audio files relevant to course
- ▶ W3C SMIL (Synchronized multimedia integration language)
 - ▶ Audio
 - ▶ Video
 - ▶ Interactive elements (Flash)
 - ▶ Presentation slides
 - ▶ Subtitles
 - ▶ Notes
 - ▶ Important links



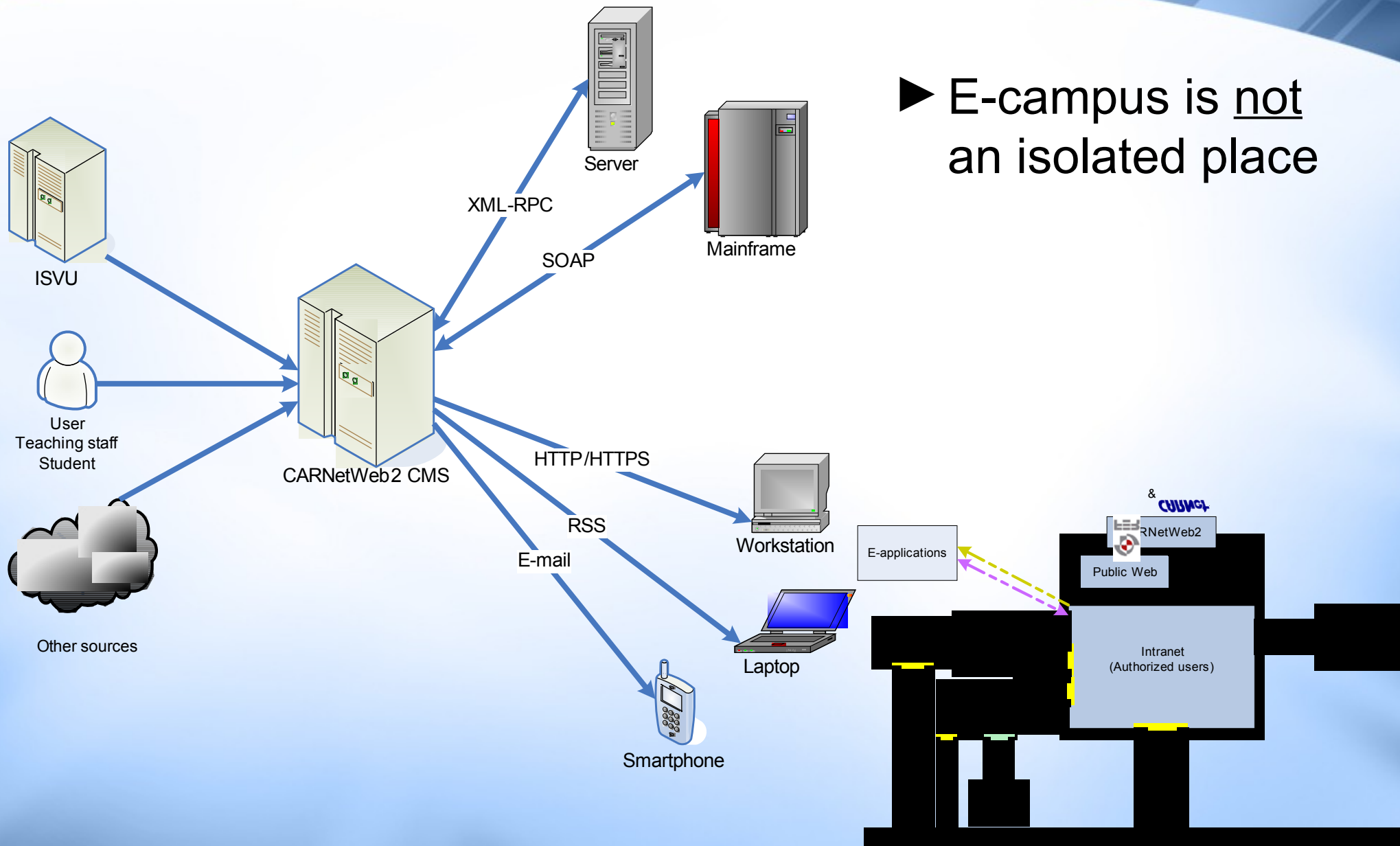
SMIL example



► Example of course presented using SMIL

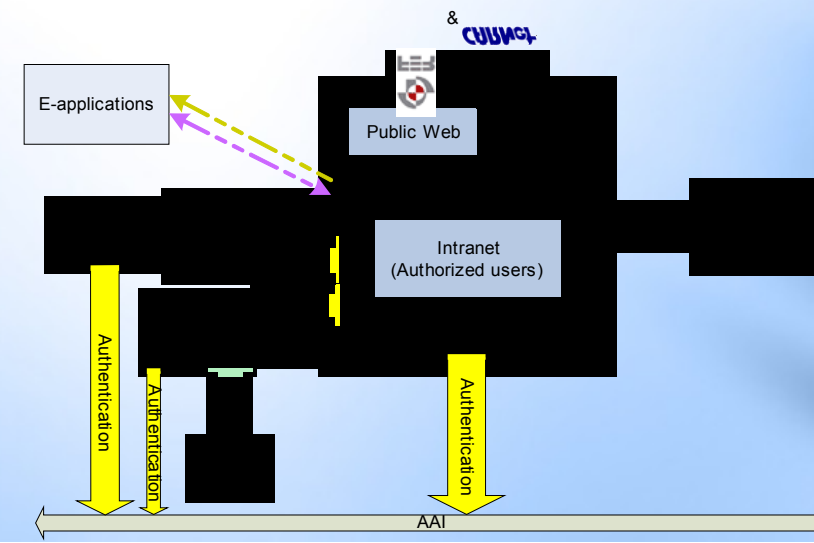


Sharing the data securely

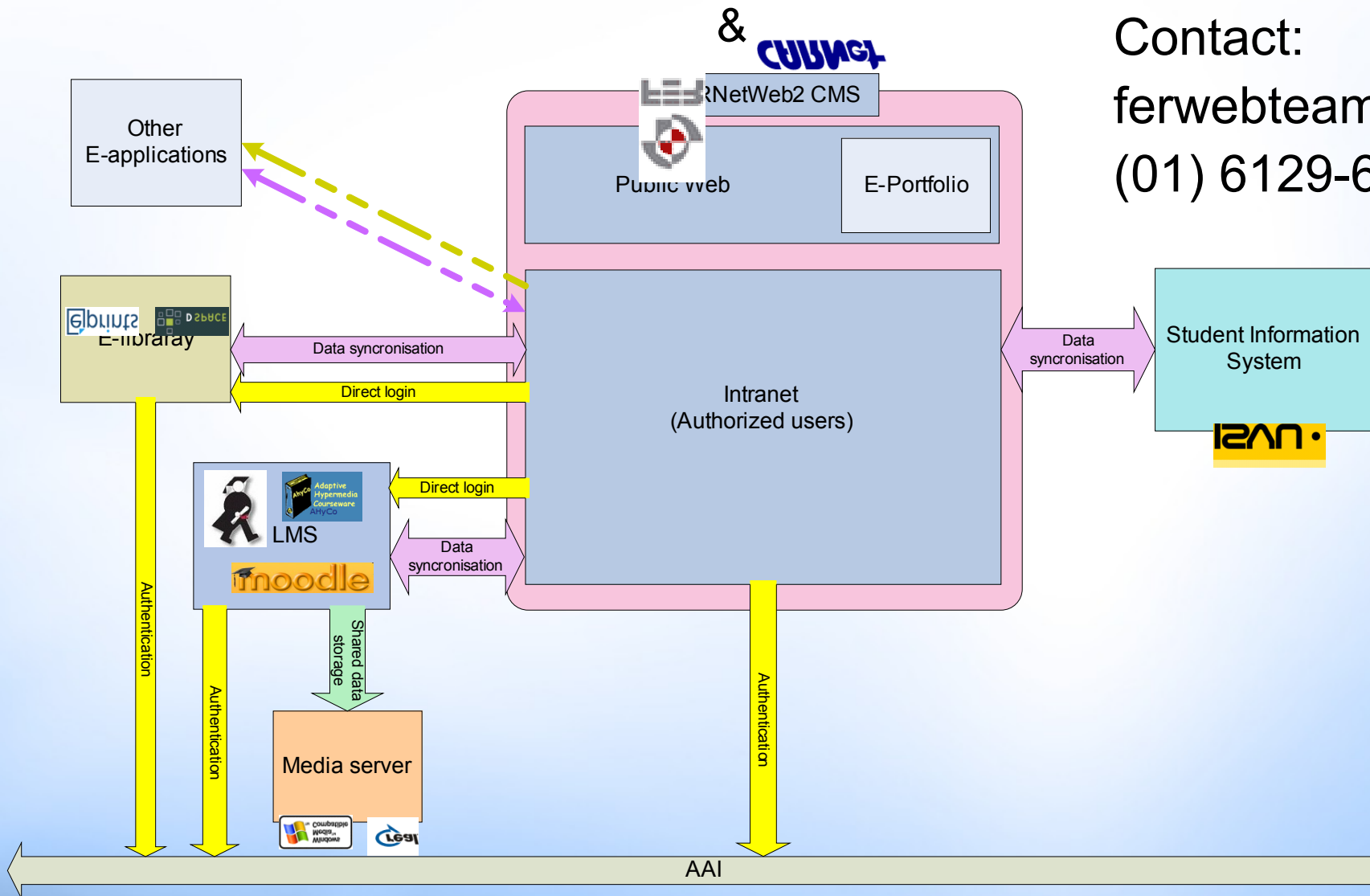


Entering the world of E-campus

- ▶ E-campus enables users to use the same login and password on all integrated systems
- ▶ Once authenticated by the CARNetWeb2 CMS, user doesn't need to re-authenticate on other systems
- ▶ CARNetWeb2 CMS enables other systems to use AAI infrastructure:
 - ▶ SOAP
 - ▶ XML-RPC



Time for E-campus questions!



Contact:
ferwebteam@fer.hr
(01) 6129-660