



*CARNet Users Conference 2002.*

# **WWW.HR: Introducing XML-Based Content Management To General Info On Croatia**

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# Presentation outline

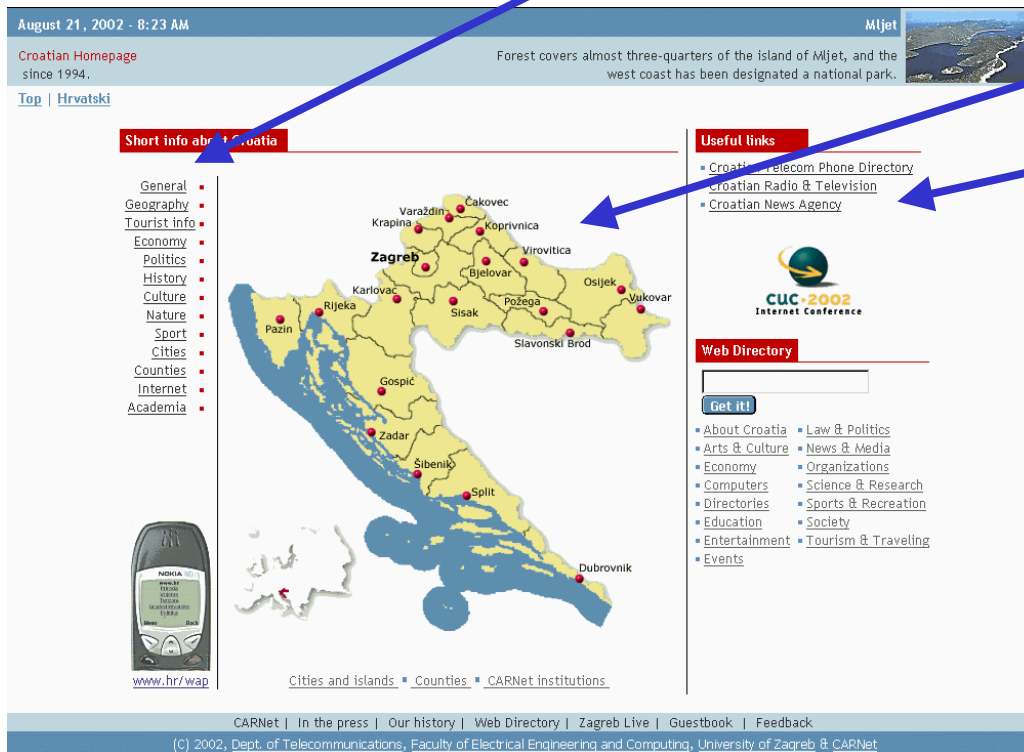
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- Current difficulties with “general info on Croatia”
- Proposed XML-based content management system
- System components
- Results
- Conclusion

# Current situation on “general info on Croatia”

- part of WWW.HR service
- provides basic and useful information about Croatia
- Includes: **hierarchical menu** with 13 different categories,

**various content,  
useful links**



August 21, 2002 - 8:23 AM

Croatian Homepage since 1994.

Top | Hrvatski

**Short info about Croatia**

- General
- Geography
- Tourist info
- Economy
- Politics
- History
- Culture
- Nature
- Sport
- Cities
- Counties
- Internet
- Academia

**Useful links**

- Croatian Telecom Phone Directory
- Croatian Radio & Television
- Croatian News Agency

**Web Directory**

Get it!

- About Croatia
- Arts & Culture
- Economy
- Computers
- Directories
- Education
- Entertainment
- Events
- Law & Politics
- News & Media
- Organizations
- Science & Research
- Sports & Recreation
- Society
- Tourism & Traveling

Cities and islands | Counties | CARNet institutions

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# Problem statement

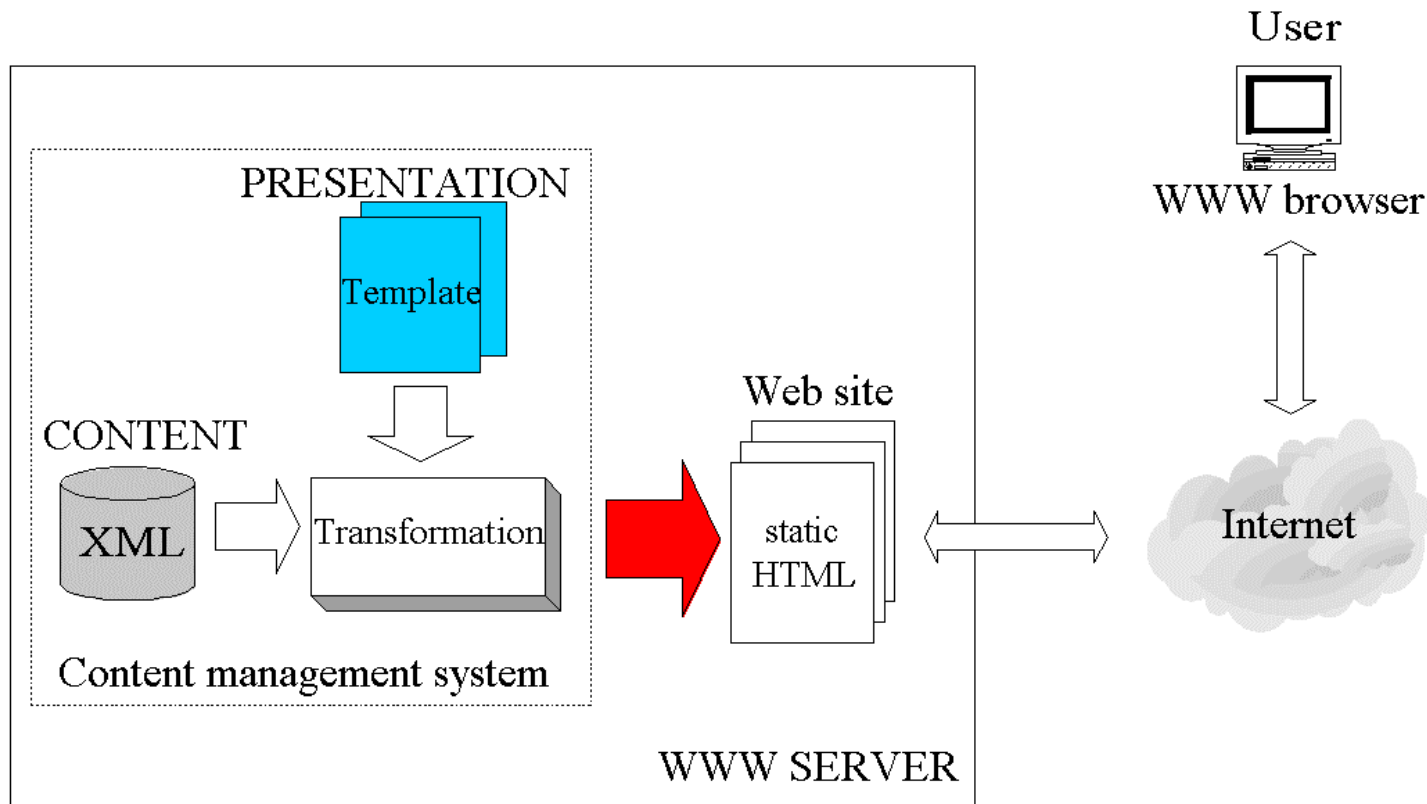
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WWW.HR is organised as a **server file system**:

- many individual HTML pages
- time consuming and complicated maintenance
- information redundancy and inconsistency
- Croatian and English version

**IMPROVEMENTS NEEDED!**

# Proposed content management system

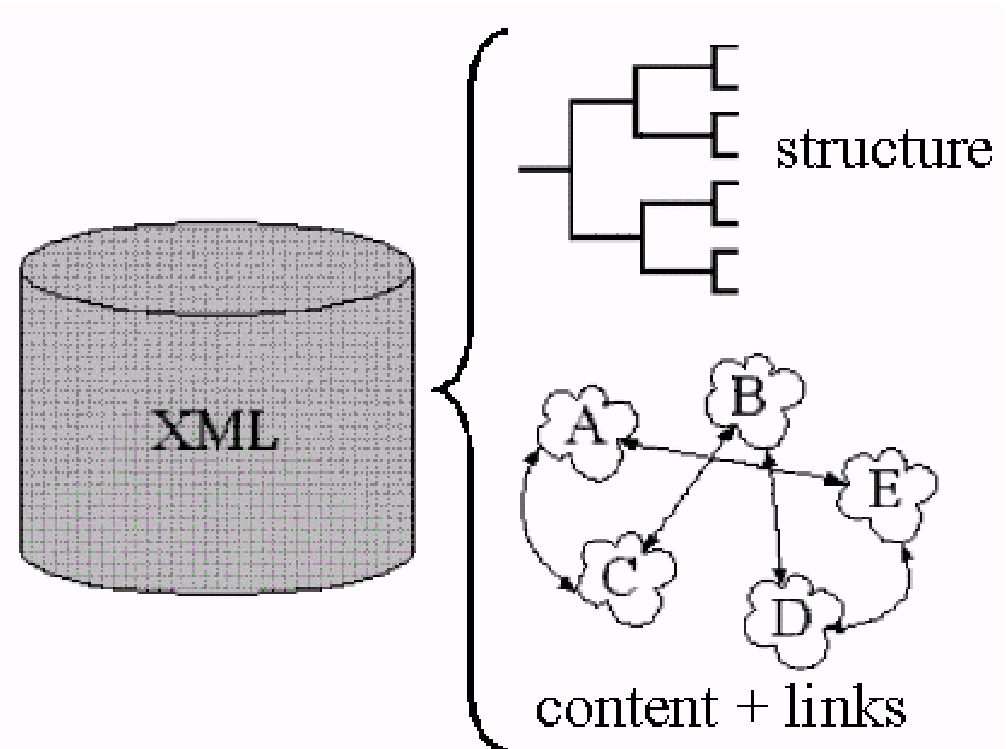


**Three components: XML DB, HTML template, Perl script**

Content, Presentation, Implementation → separated

# XML database (1)

- plain text document  
(easy to edit)
- elements designated with  
markups (easy to follow)
- contains:
  - structure
  - content (**fragments**)
  - links



# XML database (2)

XML document is divided into 2 parts:

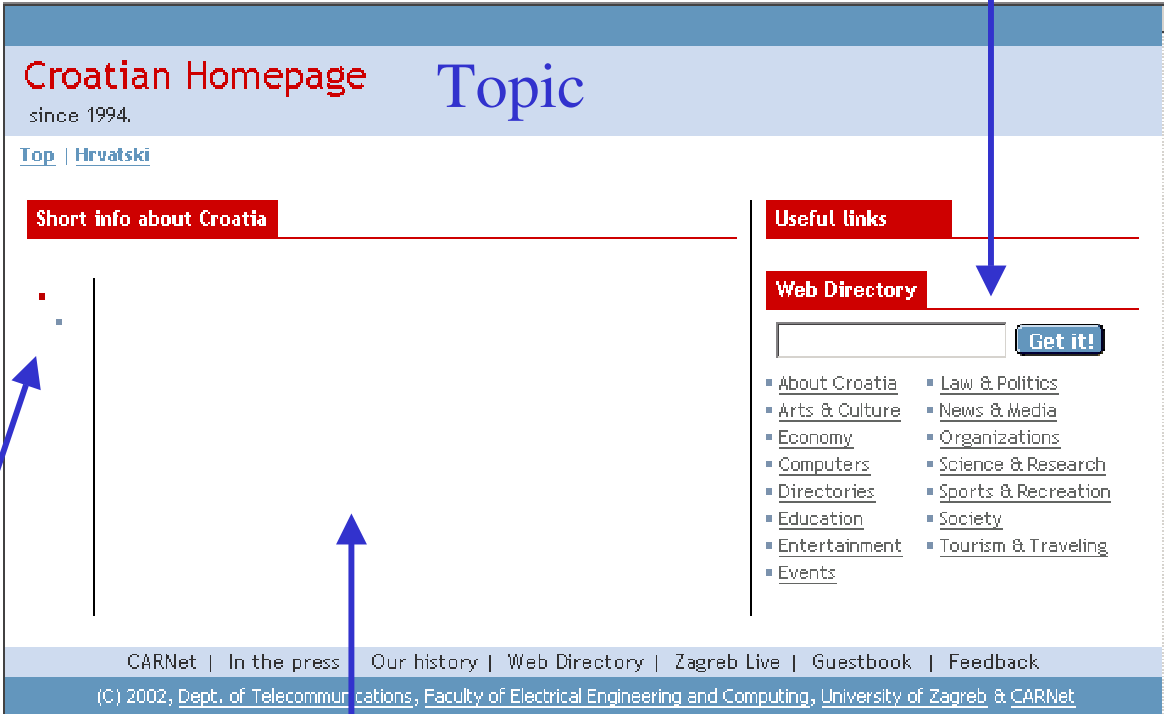
```
<?xml version="1.0" ?>
<!DOCTYPE WWWHR (View Source for full doctype...)>
- <WWWHR>
  <!-- DIO XML-a S IZBORNICIMA -->
+ <MENU>
  <!-- DIO XML-a SA SADRZAJEM -->
+ <SADRZAJ>
</WWWHR>
```

1. Element **<MENU>**:  
Logical structure,  
topics, names, links and fragment references
2. Element **<SADRZAJ>**:  
Content fragments (saved only once),  
each with a unique identification (ID number)

# Presentation template

- One template for all the pages
- Predefined spaces
- New graphical and interactive elements possible

Useful links



Menu

Content space

Useful links

Croatian Homepage since 1994. Topic

Top | Hrvatski

Short info about Croatia

Useful links

Web Directory

Get it!

- About Croatia
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- Additional style adaptation with CSS script



# Transformation

```
C:\PERL\DIPLOM~1>perl xth.pl
DOBRO DOSLI !
Ovo je program za pretvorbu XML dokumenata u HTML datoteke.
Unesite ime XML datoteke: hrvatski.xml
Unesite ime predloska: okvir.htm
Stvaram datoteke...
index.htm
općenito.htm
geografija.htm
gospodarstvo.htm
politika.htm
povijest.htm
kultura.htm
priroda.htm
sport.htm
visoko.htm
gradovi.htm
zupanije.htm
internethr.htm
turist.htm
XML dokument sadrzi glavni izbornik i 13 podizbornika.....
...KRAJ!
C:\PERL\DIPLOM~1>_
```

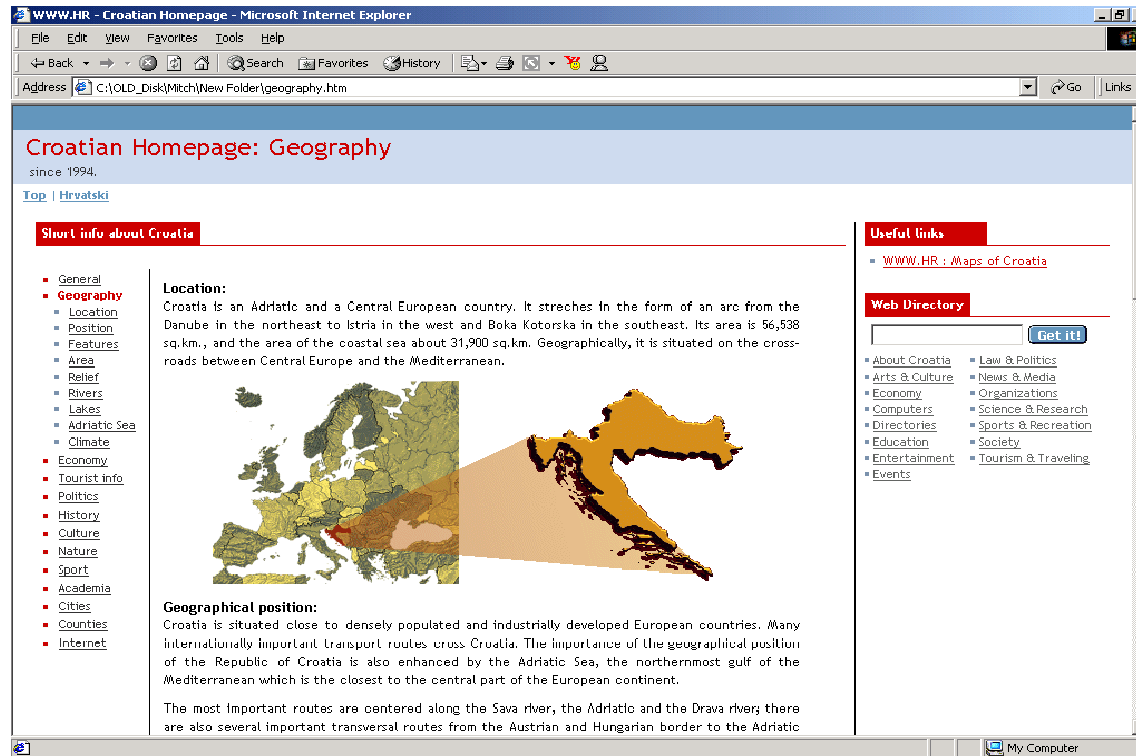
- Perl script used for XML → HTML transformation

- Perl: simple syntax, **portable** to different platforms, **easy editing**

- All changes are applied in seconds with just one execution

# Result

Final result: totally functional Web site, immediately ready for browsing



# Conclusion

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- Content management system improved
- Proposed solution accomplished:
  - Simplified maintenance
  - Efficient and improved organisation (just 3 components)
  - Accelerated data update
  - System portability (MS Windows, Unix, Linux...)