

CHISIMBA: a framework and toolset for open, collaborative and interactive parliaments

The CHISIMBA framework

United Nations
workshop for
African parliamentary
information systems

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What is CHISIMBA?

- Chisimba – Chichewa (Malawi) word for the **framework** used to build a traditional African house



What is CHISIMBA?

- An object-oriented framework for rapid development of distributed software applications
- Leveraging the power of modern web technologies, and service-oriented architecture
 - Web does not necessarily mean web browser
- Uses a Free Software stack, but also works with proprietary technologies





Architecture



Software

Information

Learning

Knowledge

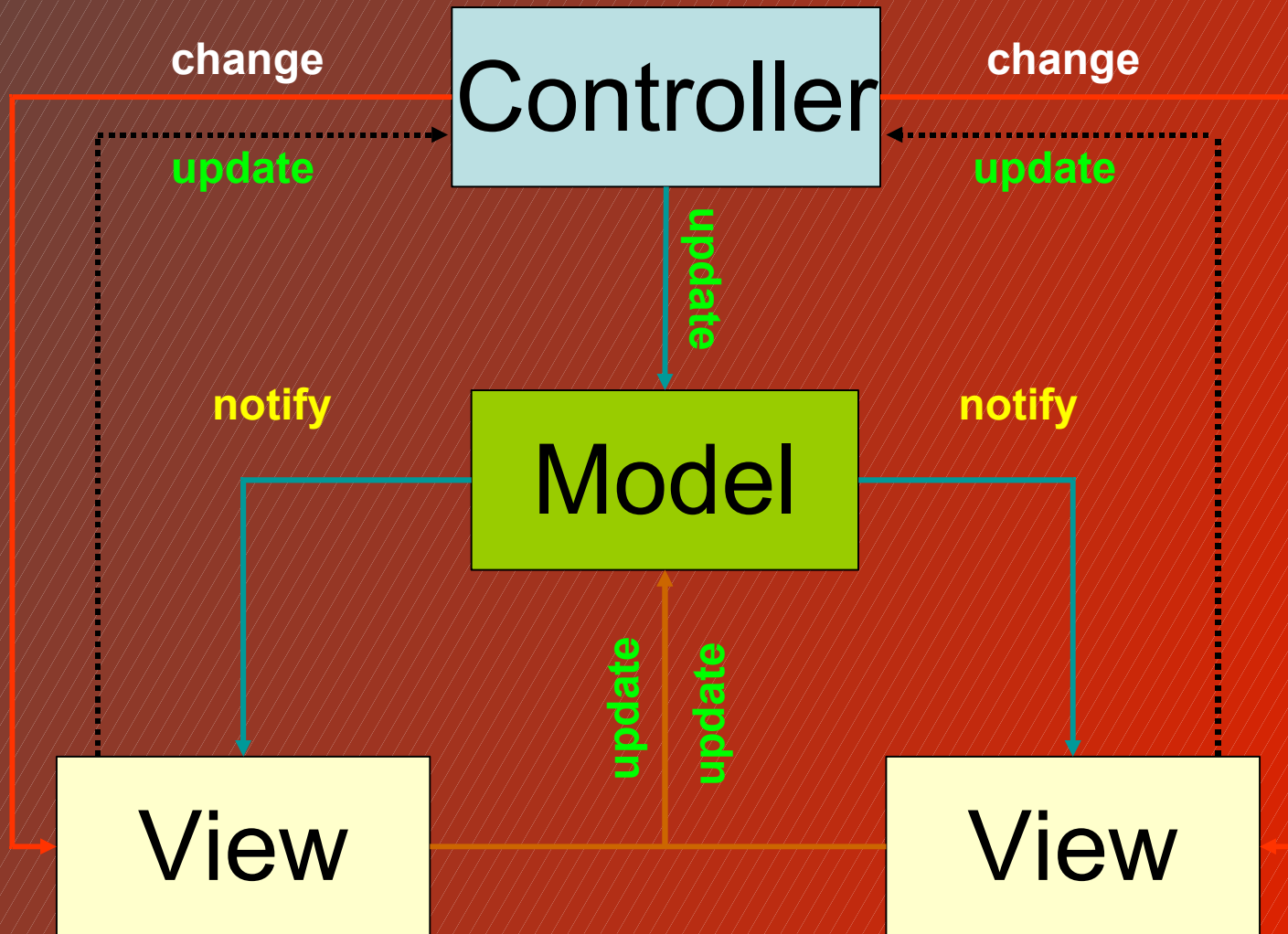


Software architecture

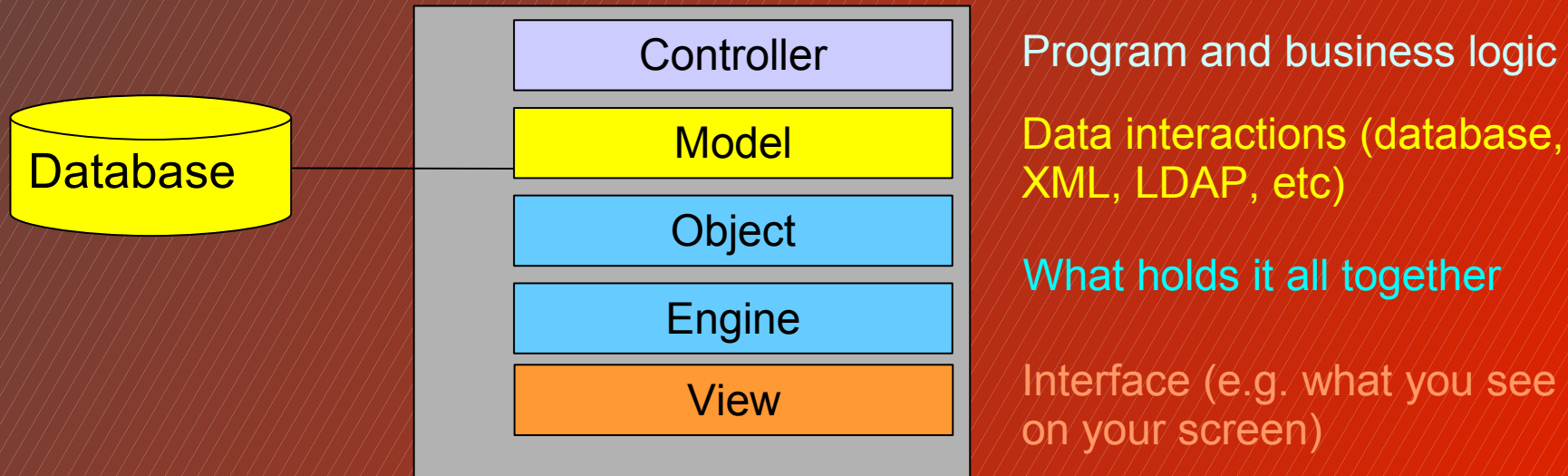
- Model-View-Controller design pattern
- Modular implementation
 - everything is a module
- Abstraction and configuration
- Services orientation



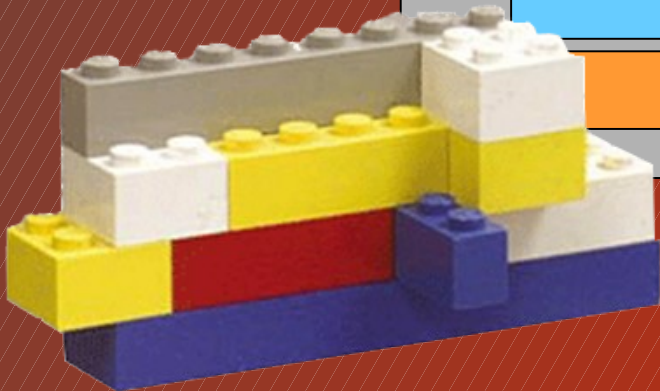
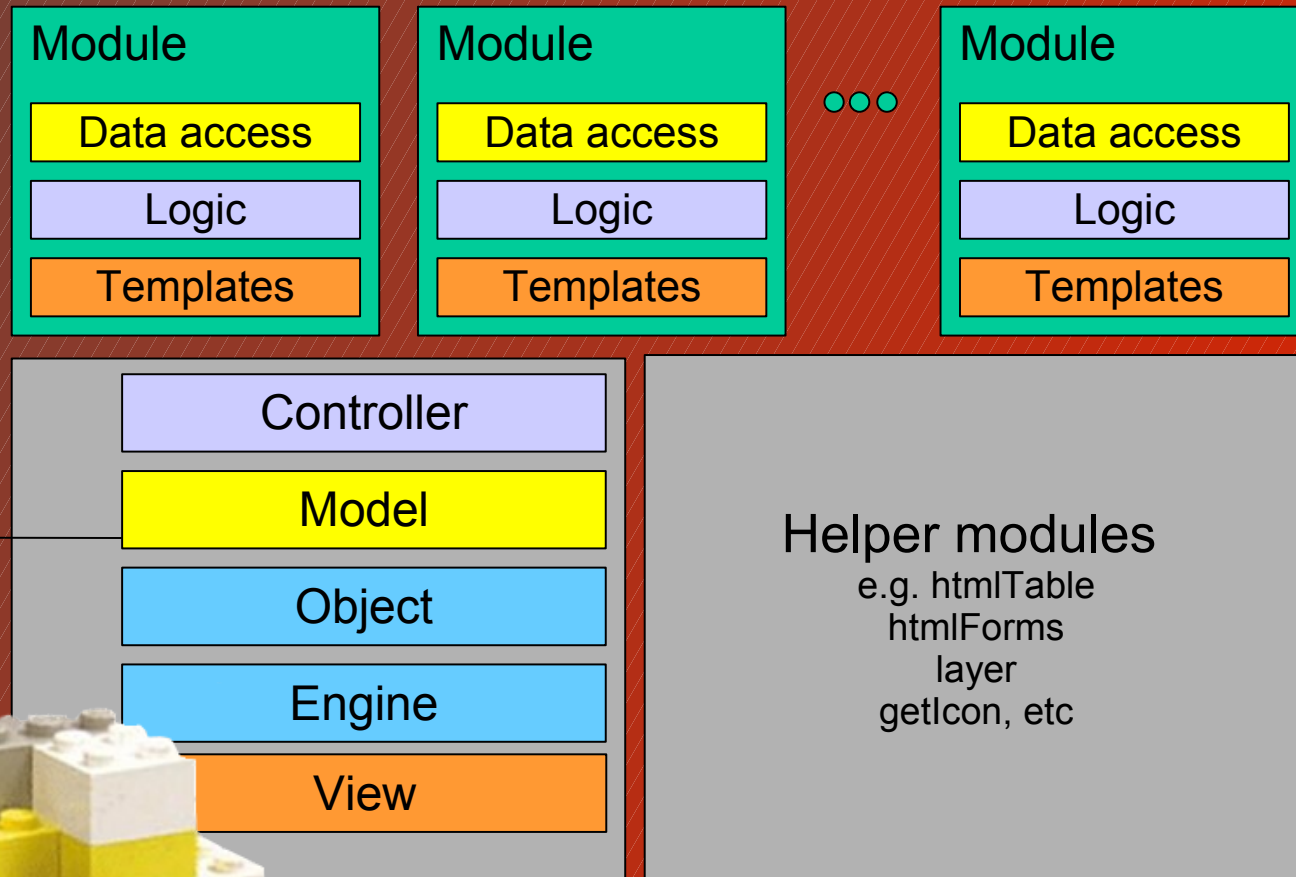
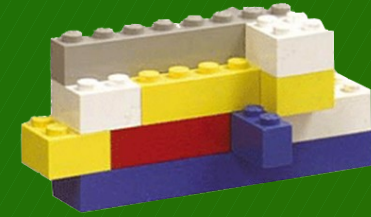
Model-View-Controller



Model-View-Controller



Modular design



Front controller implementation

The only file ever loaded directly

The module being executed by the engine

This gives the CHISIMBA framework the ability to implement sophisticated cross modular functionality.

<http://kng.nettelafrika.org/index.php?module=splashscreen>

Controller

Model

Object

Engine

View

Database



Abstraction and configuration

- Configuration handled by XML structures

```
<?xml version="1.0" encoding="ISO-8859-1"?>
```

```
<Settings>
```

```
<CHISIMBA_SITEROOT_PATH>/var/www/chisimba/</CHISIMBA_SITEROOT_PATH>
```

- Encoding can be changed to suit locale settings, even in the config!
- All elements of the system abstracted
 - Language
 - Names
 - Configurations
 - etc



XML Services

- SOAP Services
- REST based Services
- Facade of services for easy deployment and use
- Total abstraction from the core of the system
- Rapid integration and consumption of external services from legacy systems
- Easy to provide many services into the system



Integration

- Easy integration with multiple technologies and legacy systems
- FOSS, Open Source or Proprietary systems
- Databases supported
 - MySQL
 - PostgreSQL
 - Oracle
 - MS SQL Server
 - and more...



XML Capabilities

- Powerful parsing code
- XML to array for easy manipulation
- DOM, DTD, Schema all fully supported
- Interface is XHTML based! Native XML+XHTML+CSS interface
- Intelligent server code, it works to your browsers' capabilities
- On-the-fly XSLT Transformations and styling



Granular systems

Derek's school of fiddle - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://localhost/index.php?module=moduleadmin

KEWL.NextGen
Knowledge Environment for Web based Learning

User Admin About

Home » Module Admin

Module Admin

[Batch Registration Menu](#)
[Batch DeRegistration Menu](#)

[a](#) [b](#) [c](#) [d](#) [e](#) [f](#) [g](#) [h](#) [i](#) [j](#) [k](#) [l](#) [m](#) [n](#) [o](#) [p](#) [q](#) [r](#)

Module	Has Controller	Has Registration File	Has Classes	Is			
cache	Y	N	Y	N			
calendar	Y	Y	Y	N	Register	Text Elements	Module Info
calendarbase	N	Y	Y	Y	Deregister	Text Elements	Module Info
catalogue	Y	Y	N	N	Register	Text Elements	Module Info
chat	Y	Y	Y	N	Register	Text Elements	Module Info
chatadmin	Y	Y	Y	N	Register	Text Elements	Module Info
chatbot	Y	Y	N	N	Register	Text Elements	Module Info
checktext	Y	Y	Y	N	Register	Text Elements	Module Info
chess	Y	N	Y	N			
cmimportantdocuments	Y	Y	Y	N	Register	Text Elements	Module Info
cms	Y	Y	N	N	Register	Text Elements	Module Info
cmsadmin	Y	Y	Y	N	Register	Text Elements	Module Info

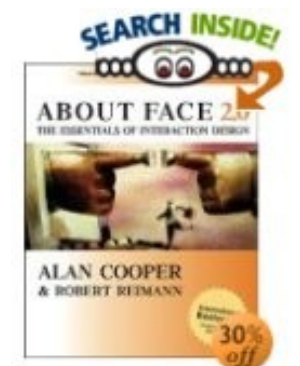
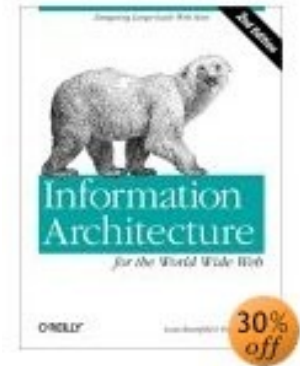
Done

This architecture allows for a completely granular system where different systems can be built by registering modules in differing combinations



Information architecture

- The art and science of structuring and organizing information systems to help people achieve their goals
- Information architects organize content and design navigation systems to help people find and manage information
- Human computer interaction
 - Designing for use
 - Evaluating design
 - Principles
 - Standards
 - Best practices
 - **Usability testing**



Part 2 – Bungeni

- How does this relate to Parliament?
- What tools are available to facilitate collaboration?
- What user support is there?
- How will the AVOIR network work for my parliament?
- How can I participate?



Bungeni

Relationship with Parliament

- Parliamentary Information System
- Takes marked up machine readable documents and provides human readable documents
- Creates an easy to use interface for both parliamentarians and citizens alike
- Access to legislation for all through Free Software



Bungeni Tools

- Some of the tools that you can expect to see...



User Support

- Vibrant Online community Mailing lists
- Integrated mailing lists
- Discussion forums
- AVOIR development / support nodes
- Training programmes available
- Documentation project(s)
- Local support in 16 African countries and increasing!



How will AVOIR work with my Parliament?

- Local support and development nodes in 16 African countries
- AVOIR network constantly growing
- e-Mail, telephone and online support available
 - In your language
 - on your terms
 - at the time when YOU need it...



How can I participate?

- By communicating with the developers
- By testing the software to make it better
- By providing constant user feedback
- By allocating resources to build additional in house capability
- By submitting ideas for new functionality and features of your system



Thank you

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