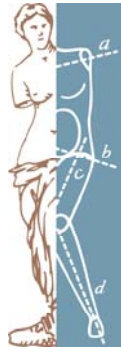


Art & Logic

Device Management Framework

A toolkit for creating web interfaces using GoAhead WebServer™

www.artlogic.com/dmf



GoAhead WebServer™ is the most popular HTTP server for serving web pages from an embedded device.

If you've decided to use GoAhead WebServer, we congratulate you on having chosen an excellent embedded HTTP server. But GoAhead WebServer is only a piece in a larger puzzle. To create a sophisticated web interface for managing your device, you'll still need to write a lot of code.

That's where we come in. Since 1996, Art & Logic has become known as the premier provider of custom web-based management solutions for companies like Motorola, Hewlett-Packard, Nortel Networks, and Broadcom.

Drawing on years of experience, we have developed the Art & Logic Device Management Framework (DMF)—a toolkit for creating web applications using GoAhead WebServer. DMF gets you closer to a finished product by providing the code that you would otherwise need to write from scratch.

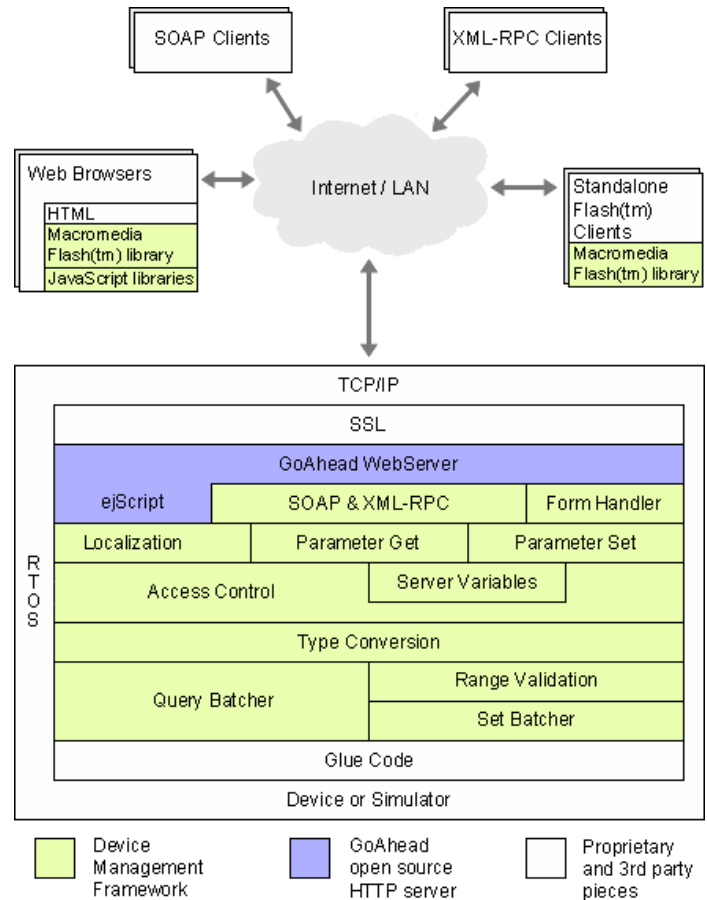
Features

Web Services with XML-RPC and SOAP

- Write once; support multiple clients. Device parameters can be exposed through multiple interfaces.
- Allows a single API to support:
 - Web-based interfaces
 - XML-RPC
 - SOAP
 - Macromedia Flash™
- Language independent. Write applications using Java, C++, VB, Python, etc. A list of compatible XML-RPC servers and clients is available here:
<http://www.xmlrpc.com/directory/1568/implementations>

Macromedia® Flash™ Web Services Libraries

- Get and set device parameters from Flash movies.
- Build user interface controls using Flash's lightweight vector graphics engine.
- Add audio and video without requiring other browser plug-ins.
- Dynamically build charts, graphs, and device front panels.
- Map Flash variable names to device parameters.
- Scale and zoom vector-based user interfaces to small PDA screens.
- Deliver content consistently across multiple browsers and platforms using the most ubiquitous browser plug-in.



Parameter Table/Tree

- Provides a single, centralized, hierarchical parameter access mechanism.
- Table includes type conversions, range validation, access control (per-parameter).
- Intelligent parameter caching minimizes inter-process communication time.
- Reduces CPU load while improving UI performance.
- Save inter-process time by getting/setting an entire struct in a single operation.

Security and Access Control

- Allow/deny access:
 - per page
 - per parameter
 - per user-group
 - per sub-tree (in the parameter table)
- Show/hide sections of pages depending on a user's privileges.
- Define up to 256 user levels.
- Integrates with SSL using GoAhead WebServer.

Session Management

- Forced user timeouts after inactivity.
- Enforce session time limits.
- Set restrictions at compile-time.

Localization

- Deploy in multiple languages from a single code base.
- Create language files for international languages, including MBCS (Multi-Byte Character Sets).
- Choose the language at boot-time or at run-time.

User Collision Handling

- Handled with the batch get/set mechanism.
- If two users attempt to change parameter values at the same time, the second one to submit will be notified that the data has changed since they started. They will be shown the new values set by the other user and be given the option of editing that data.

Customization

- Create custom fonts, graphics, etc. for OEM's.
- Build applications for multiple products in a product family.
- Three ways to create customized user interfaces:
 - at compile-time
 - at run-time
 - on a per-user basis
- Maintain all customizations within a single code base.

Error Handling

- Intelligent error pages match the look & feel of your user interface.
- Report errors on a per-user basis.
- Errors can be detected in multiple ways:
 - When serving a page. For example, when checking the user's access level for a page.
 - When a form is submitted. Each error in a batch set operation can be reported individually. In the event of an error, the form submission fails until the user provides good data.
 - Immediate error notification following function calls.

ejScript Library for Device Management

- Designed specifically for web-based management on embedded devices.
- Accessible via ejScript inside web pages.
- Functions are evaluated when pages are served.

Cookies

- Access cookies from ejScript.
- Common cookie handling functions.

JavaScript Libraries

- Create more interactive pages than with HTML only.
- Includes pre-written code for UI elements including:
 - Bar graphs
 - HTML table sorting
 - Navigation functions
 - Cookies
- Use JavaScript includes to reduce memory footprint.

Platform Support

- Contains no platform-specific code. Just compile and run!
- GoAhead WebServer is written in portable ANSI-C code. Currently supported platforms include Embedded Linux (and Linux), eCOS, VxWorks, QNX, Lynx, Windows (including Windows CE), and Mac OS X.

Device Simulation

- Develop your hardware, firmware, and web code concurrently across multiple platforms.
- Allows web designers to work on their platform of choice.
- Clean separation between server-side code and web code.
- Web designers don't need to know C programming, and embedded programmers don't need to know web programming languages.
- Includes a consistent and uniform parameter access model.

Memory Footprint and Modularity

- Compile only the components you need.
- Maximum build size is about 300K.

Documentation

- Detailed user manual.
- Includes ejScript documentation (not included with GoAhead WebServer).

Co-Engineering and Support

- Includes 40 hours of co-engineering from Art & Logic. An experienced DMF programmer will help you to get started on your project.
- Includes 90 days of e-mail support with 24-hour turnaround on questions.

Art & Logic is GoAhead Software's support partner for GoAhead WebServer and manages the open source code base at <http://www.goahead.com/webserver/webserver.htm>.

Mature and Guaranteed

- Art & Logic has done over 30 embedded web-based management projects since 1996 and several using DMF.
- DMF is guaranteed to work. This is how our business model works.
- The DMF has been built and tested on real shipping products and has been shaped by the experience.

For more information, contact:

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