

Battle for Wesnoth

- A turn-based strategy game
- On a hexagonal board
- Role playing game style elements
- Single player and multiplayer modes
- Runs on a variety of platforms
- Highly customizable and 'moddable'.

By recalling the same units over and over, you can build up a powerful and experienced army.

- The Wesnoth Tactical Guide

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So what's special about it?

- A large developer and player community
- A mature project, but with active development and many improvements
- High quality artwork: both graphics and music
- Very well-balanced by a tireless team of playtesters
- Fun, unique gameplay

Rakshas

I am under the spell of the power of the sword, I lead the Orcish people. I am here simply finishing the job Khazg Black-Tusk started years ago - the conquest of Knalga.

HP
22/18
XP
0/23

Plant
in
1
ent, intelligent
rship
movement: 5/5
5-3 sword
melee--blade
4-3 crossbow
ranged--pierce

End Turn

Technologies used

- Advanced C++, with some use of Boost
- The Simple Directmedia Layer (SDL) libraries: SDL, SDL_net, SDL_ttf, SDL_image
- gettext for internationalization
- Python to allow scriptable AIs
- Otherwise, most of Wesnoth's technology is “home grown”.

The Wesnoth community

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- <http://forum.wesnoth.org> -- a web forum (phpbb)

any points since last visit

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You last visited on Thu Feb 21, 2008 5:50 am

The time now is Thu Feb 21, 2008 8:01 am

[Battle for Wesnoth Forum Index](#)

[illegible]

What's hard about making a FLOSS game?

- There is very little 'direction'. There are many ways one can take a game project.
- There is no 'ending'. A game project can be improved indefinitely.
- A game requires mastery of many different disciplines. Technical excellence, artistic excellence, and game design all have to converge.

The Northern host encamped at Galcadar, by the ford of Abez, and the king led his forces to meet them. Splitting his army in two, he led one half while his son, the crown prince Eldred, led the other.

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How it all began

- In June, 2003, I developed a very simple hex war game and released it as “Battle for Wesnoth 0.1”.
- All major gameplay features were already present in this version.
- Francisco Munoz sent me some improved artwork for the game.
- Further releases were made; a forum set up; a community began forming.



Day
Turn: 2/28
Gold: 5
Villages: 1
Grassland

Lawful
hp: 38/38
xp: 0/48
moves: 7/7
spear (pierce)
melee
12-2



The Wesnoth Engine

- ~90k non-blank lines of C++ code.

- Modern style of C++, using the STL, templates, exceptions, and some parts of Boost. RAII is used heavily; very few memory leaks.

- Minimal dependencies; we program many things ourselves

- Includes an AI, WML parser, random map generator, theme/widget engine, and support for all game logic.s

```
shown_hosts.insert(hostpair(host,port));

config::child_list redirects;
config data;
sock = dialogs::network_connect_dialog(dispatch, _("Connecting to Server..."), host, port);
```

```
do {
    if (!sock) {
```

```
        return ABORT_SERVER;
```

```
    }
```

```
    data = dialogs::network_receive_dialog(
        host, port, _("Receiving from Server..."), sock);
    mp::check_response(data_res, data);
```

```
mp::check_response(data_res, data);
```

```
// Backwards compatibility "version" attribute
```

```
const std::string& version = game_config::version;
if (false && version.empty() == false && version != game_config::version) {
```

```
    il8n_symbols["version1"] = version;
```

```
    il8n_symbols["version2"] = game_config::version;
```

```
    const std::string errorstring = text("The server requires version '$version1' while you are using version '$version2'");
```

```
    throw network::error(errorstring);
```

```
    throw network::error(errorstring);
```

```
    throw network::error(errorstring);
```

```
// Check for "redirect" messages
```

```
if (data.child("redirect")) {
```

```
    config* redirect = data.child("redirect");
```

```
    host = (*redirect)["host"];
```

```
    port = lexical_cast_default<unsigned int>((*redirect)["port"], 15000);
```

```
if (shown_hosts.find(hostpair(host, port)) != shown_hosts.end()) {
```

```
    throw network::error(_("Server-side redirect loop"));
```

```
}
```


Problems with Wesnoth's Design

- SDL: little new development, slow to do many things. However, OpenGL has been determined not to be a reasonable alternative.
- Other SDL libraries (SDL_ttf, SDL_net) have proved to have various stability and other problems.
- Sometimes slow
- Memory hungry



Va
Trollwelp
Stufe 1
schnell, furchtlos
Regeneration
BP: 5/5
7-2 Faust
Nahkampf-Wucht

Join Game

Observe Game

Create Game

Quick Replays

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Game Lobby

Networking Wesnoth

- Not originally designed to be networked.
- Originally, saves could only take place at the end of a scenario.
- Later, saves implemented as start-scenario + deltas ("replay")
- This allowed for replays of a game to be stored
- Also allowed sending deltas over the network to implement network multiplayer

→ Dave ↑

Formi (Silvik)

LuKe (Silvik)

Miko (Silvik)

Tavik (Silvik)

Alucard

Drudares

Londor

Otherside

gogoth

horatio

ripfrench

Anarchid (Vall...)

Mrpa B...

Breikidance (L...

CZ-Christina- ...

CZ-pokecane...

CZkian_Caesa...

Conner (Conn...

Darken (La pa...

Dragonlvr525 ...

Elenrc (Elenrc'...

Foxtrot (Mrpa ...

GKW_zryty (Gr...

Gallifax (Conn...

Hammer (Ham...

Heimdall (nom...

Hope (Link's g...

<server> Welcome to the official development multiplayer server! The latest development release is 1.3.18 (changes). If you're certain you found a new bug please report it at bugs.wesnoth.org as detailed as possible. Enjoy your stay!

Join Game

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Game Lobby

Networking Wesnoth (cont.)

- Very thin/dumb server that forwards data and little more
- Allows a very efficient server that can service many clients. No meta-server needed.
- Clients must have exactly the same version and data.
- Cheating by modifying source code is very easy.

<server> Welcome to the official development multiplayer server! The latest development release is 1.3.18 (changelog.wesnoth.org).
If you're certain you found a new bug please report it at bugs.wesnoth.org as detailed as possible.
Enjoy your stay!

Dave

Formi (Silvik)

LuKe (Silvik)

Miko (Silvik)

Tavik (Silvik)

Alucard

Driftres

Londor

Otherside

SKULL

gogoth

Gogoth

ripfrench

Anarchid (Vall...

BOB (Mrpa B...

Breikidance (L...

CZ-pokecane...

CZ-pokecane...

CZklan_Caesa...

Chime1 (Elenr...

Conner (Conn...

Darken (La pa...

Drage_CZ (CZ...

Dragonlvr525 ...

Elenrc (Elenrc'...

Foxtrot (Mrpa ...

GKW_zryty (Gr...

Gallifax (Conn...

Hammer (Ham...

Heimdall (nom...

Hope (Link's g...

Join Game

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Game Lobby

Wesnoth Multiplayer

- A sub-community focused on multiplayer soon formed.
- Multiplayer developers began concentrating on tuning and playtesting the game more finely than before.
- Six different factions, many maps, finely tuned and balanced.

→ Dave

Formi (Silvik)

LuKe (Silvik)

Miko (Silvik)

Tavik (Silvik)

Alucard

Ondrej

Londor

Otherside

SKULL

gogoth

Vrable

ripfrench

Archid (Vall...

BOB (Mrpa B...

Breikidance (L...

CZ-Christina- ...

CZ-pokecane...

CZ-kaesa...

Chime1 (Elenr...

Conner (Conn...

Darken (La pa...

Drage_CZ (CZ...

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Wesnoth Markup Language (WML)

- An XML-like language which is used throughout Wesnoth.
- Is used to create scenarios, campaigns, define units, define display and theme settings, and as the save game and network protocol format.
- Also supports a pre-processor to make things easier.
- Has evolved greatly over time.

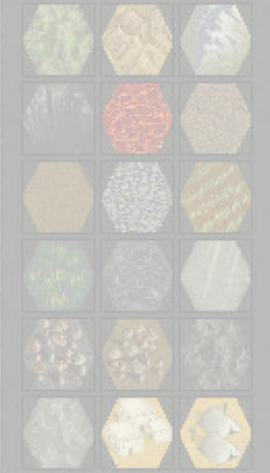
```
[scenario]
  id=01_The_Elves_Besieged
  #textdomain wesnoth-http
  name="The Elves Besieged"
  map_data="{campaigns/Heir_To_The_Throne/maps/01_The_Elves_Besieged.map}"
  {SCENARIO_SETTINGS "battle.ogg"}
  {TURNS 16 14 12}

[DEFAULT]
  next_scenario="02_Markus's Story"
  victory_when_enemies_defeated=no

[event]
  name=prestart
  [scenario]
    side=1
  [objective]
    description= _ "Move Konrad to the signpost in the northwest"
    condition=win
  [/objective]
  [objective]
    description= _ "Death of Konrad"
    condition=lose
  [/objective]
  [objective]
```


Wesnoth Map Editor

- Much of Wesnoth's code is reused to make a map editor.
- Allows easily and advanced creation of maps.
- Doesn't support any WML. One must add units, events, etc to a map oneself.



Wesnoth's AI

- Wesnoth is a complex problem for an AI to solve: huge state space, incomplete information, non-deterministic outcomes.
- There is a 'default' C++ AI, and support for more AI's to be written in C++ or Python.
- All of the current AI's use simple heuristic based approaches.
- Default AI is configurable.



Aetharan
Fencer
level 1
lawful
resilient, strong
skirmisher
movement: 1/6
5-4 sabre
melee-blade

End Turn

Wesnoth's Artwork

- Wesnoth began with no artists at all.
- Made adding art as easy as possible to attract artists.
- Maintained a policy of “if someone does the art for this feature, I **will** do the code”
- Many of Wesnoth's current artists taught themselves art during development.
- Strong artists work with weaker artists.
- Artists misunderstanding or disliking the GPL and FLOSS has been an ongoing problem.



HP
28/28
XP
0/42

Rhaec
Mage
Human
level 1
lawful
resilient, quick

movement: 0/6
5-1 staff
melee-impact
7-3 missile
ranged-fire

End Turn

The Battle for Wesnoth











Other Cool Features

Unit List

Based on version 1.3.18

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- Wesnoth's community constantly produces cool tools and features.
- Add-on Server
- stats.wesnoth.org (Rusty Russell)
- units.wesnoth.org
- phpbb forum extensions
- WML lint (Eric Raymond)

Level 0	Level 1	Level 2	Level 3	Level 4
	 Drake Burner lawful HP:43 MP:5 XP:45 melee: 5 - 4 ranged: 6 - 4	 Fire Drake lawful HP:63 MP:5 XP:80 melee: 9 - 2 ranged: 7 - 5	 Inferno Drake lawful HP:82 MP:5 XP:150 melee: 12 - 2 ranged: 8 - 6	
		 Drake Flare lawful HP:54 MP:5 XP:80 leadership melee: 8 - 3 ranged: 7 - 4	 Drake Flameheart lawful HP:72 MP:5 XP:150 leadership melee: 11 - 3 ranged: 9 - 4	
	 Drake Glasher lawful HP:43 MP:5 XP:45 melee: 5 - 4 melee: 6 - 4 (firststrike)	 Drake Gladiator lawful HP:66 MP:5 XP:95 melee: 8 - 4 melee: 11 - 3 (firststrike)	 Drake Enforcer lawful HP:85 MP:5 XP:150 melee: 11 - 4 melee: 14 - 3 melee: 8 - 5	
		 Drake Slasher lawful HP:62 MP:5 XP:105 melee: 11 - 3 melee: 17 - 2 (firststrike)	 Drake Warden lawful HP:82 MP:5 XP:150 melee: 16 - 3 melee: 23 - 2 (firststrike)	

How to get involved...

- Participate on the Wesnoth forums and IRC channel
- Find an area of interest and submit a patch
- Contributors of 2-3 useful patches are typically granted SVN access
- Contribute to Wesnoth (or another Open Source project) as part of Google's Summer of Code (<http://code.google.com/soc>).

Conrad, the youngest of Garard's nephews, secretly entered the palace and stole away Konrad, the youngest of Garard's nephews, thereby saving him from death.

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