Krister Fardig
kfardig
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Master of Magic 2 : The Revenge

Specification Document

1. Description

Master of Magic 1 is a 1994 DOS based game developed by Simtex and published by Microprose. Similar to its more famous relative Civilization, the goal of Master of Magic is to become the dominant leader in the world. You can accomplish this by either defeating all the other wizards or by casting the Spell of Mastery.

The gameplay is carried on a 2D map of the world. You move armies around the board, fighting monsters and the armies of opposing wizards, and conquering cities, ruins, and nodes. Cities provide the resources to produce and support your armies, while ruins provide treasure bonuses, and nodes provide mana bonuses. Mana is collected through a variety of ways, and then used to research and cast spells that can influence all aspects of gameplay. Battles are simulated either by the computer, or carried out in an isometric battlefield.

2. System Model Diagram

3. Annotations

Logical Backbone - Program kernel. Spawns off the initial interface and provides data storage and interaction between the different view modules.

Interface Backbone - Base GUI. Provides initial menus and a graphical pane to display the specific views. Also provides any common features required by the views.

Map View/Module - Overland map. Handles unit movement, initiation of combat, overland actions such as node melding, road building, and spell casting.

City View/Module - City interface. Handles population distribution, buildings, production, and garrisons.

Unit View/Module. Unit Statistics. Graphical representations of units for non-battle purposes.

Battle View/Module - Isometric battle simulation. Allows for movement of units, initiations of attacks, casting of spells

Spellbook View/Module - Spell costs and effects.

AI - No AI necessary for human player. For computer opponents, provides turn taking, production distribution, strategic command, and pathfinding.

4. User Interface

5. Annotations

The game is subdivided into a series of views. The general map view provides a base to reach all the specific subviews (either by selecting it directly or through triggers like combat that initiate on the map view) Most things are mouse and menu driven, though some functions are best served by the keyboard (unit movement for example).

6. Non-functional Requirements

Performance - No slowdown or screen flickering when running in the Sunlab. Smooth graphical transitions and no more than a 5 to 10 second delay during the computer's turn (excluding any movement displayed)

Testing - Significant component testing on each of the views. As each view is related to (mostly) independent modules and each module probably owned by only one person, this provides the most directly flow of information and fixes. If this is not done, integrated testing is going to a tremendous pain.

Reliability - Does not crash, and successfully loads and saves games. As this is a game, there is no specific data verification to be done, but game stability is paramount.

Ease of Use - Everything can be driven by mouse and menu, although keyboard support is provided when logical (see movement). No subviews take more than 3 clicks to get to from the main page, although a particular subview with many, many parts may be displayed as a list or pages in a book that require more clicks to navigate. Also, intuitive and obvious menus and labels. Nothing should be buried in a submenu unless it is truly specific to that subarea.

Portability - Runs on Linux in sunlab.

Documentation - User manual describing all user interfaces and commands, as well as providing a backstory and goals for the game. Codewise, extensive information for each module, focusing on all functions/functionality that are called by another module.

Dependencies - None other than whatever is used as a graphical base for GUI work. In theory, possibly animation support, but it isn't very likely that we reach the point where animations can be done in the time we have.

7. Requirements

*** Core Features (Priority 0)

* Map View
    * Viewable representation of world, including :
        Terrain
        Cities
        Units
    * Ability to select and move units
    * Ability to initiate attacks
    * Ability to create/discover cities

* City view
    * Viewable representation of city, including :
        Size
        Garrison
* Ability to grow
    * Ability to build armies

* Unit view
    * Viewable representation of unit, including :
        Statistics : Attack/Defense/Health

* Battle view
    * Display result of initiated battles

* Opponents/AI
    * Exist statically, no AI, no actions

* Basic Interface
    * Initial Menu
    * Start Game
    * Quit
    * Game Over

*** Basic Features (Priority 1)

* Map View
* Unexplored Terrain Obscured
    * Magic Nodes
    * Ruins/Towers/Etc.

    * Roads
    * Terrain/Roads influence movement rate/production

* City View
    * Ability to create buildings
    * Multiple worker types (Farmer/Worker/Specialist/Rebel/etc.)
    * Production of gold/food/iron/mana

* Unit View
    * More Statistics :
        Speed
        Experience
        Resistances
        Ranged Attacks
        Mana
        Special Abilities
        Maintainance

* Battle View
    * Isometric or 2D battle map
    * Starting positions for involved units
    * Ability to move units
    * Ability to initiate attacks with units

* Spells
    * Viewable representation of spellbook
    * Ability to cast spells on :
        Terrain
        Cities
        Units
    * Mana storage system

* Opponents/AI
    * Simple if/then AI
    * Cities create things
        * Improve city AI (build in preset priority order)
    * Units move/attack/defend
        * Explore unknown
        * Attack enemy (if adjacent)
        * Defend city

* Basic Interface
    * Wizard selection
        * Customized magic areas
        * Customized characteristics/bonuses

*** Desired Features (Priority 2)

* Map View
    * Surveyor ability (calculate city potential)
    * Ability to split/join units
    * Bonus terrain
    * Rivers

* City View
    * Ability to hurry production
    * City unrest
    * Wasted resources

* Unit View
    * More units
* Battle View
    * Animation

* Spells
    * Research model
    * Skill model
    * Mana creation
    * Group spell effects
        Mother/daughter spell linkage

* Opponent/AI
    * To Be Determined (More Advanced AI)

* Basic Interface
    * Summary pages available
    * Diplomacy model
    * Hero/Mercenary purchasing
    * Special Item creation/purchasing
    * Load/Save game

*** Ideal Features (Priority 5) :
* Map View
    * Map Creation

* City View
    * Nothing specific

* Unit View
    * Customizable graphics

* Battle View

    * Spell attacks

* Spells
    * Mana Economy
    * Visual Effects
    * More spell effects for all aspects of game

* Opponent/AI
    * "Smart" AI (again, TBD)

* Basic Interface
    * Quicksaving
    * Logging
    * Game replay

8. Risky Parts

    Nothing is inherently risky other than the sheer scope of the project. All the subcomponents are technically straightforward, but the number of them and the interaction required between all parts makes this a pain to attempt to code in the time we have. The core and basic features really should be quite doable in the time allowed, but don't result in a particularly functional game…


Master of Magic
Continue
Load Game
New Game
Hall Of Fame
Quit To DOS


Master of Magic
Game Options
Difficulty
Normal
Opponents
Four
Land Size
Large
Magic
Normal
Cancel
OK

Select Wizard

Rjak

Infernal Power.

Merlin

Sss'ra

Raven

Tauron

Sharee

Freya

Lo Pan

Horus

Jafar

Ariel

Oberic

Tlaloc

Rjak

Kali

Custom

Hamlet of Mishran

Draconian

Population: 4,000 (+70)

Resources

Enchantments

Buildings

Units

Producing

Increases population growth rate.

Housing

BUY CHANGE OK


Rakir
SPELL
WAIT
INFO
AUTO
FLEE
DONE
Skill: 50
Mana: 1515
Range: 2.5x