

Muzzling the Mirkwolf

Programming for an online text-
based role-playing game

Return of the Shadow

- Text-based
- Role-playing
- Gain experience and levels/Become stronger/better
- Based on Tolkien's middle earth

My "Project"

- Ongoing programming position
- 70 source files, 72,000+ lines of code
- Fix bugs
- Add new things
- Change existing things for balance reasons
- Change things for other reasons

Return of the Shadow

- Mortal/Immortal
- Mob (npc)
- rent
- Pk (pvp)
- races
- Classes
- vnums

A few problems

- Programming with others
- Administrating
- Game balance
- Union's internet

Programming with others

- Consisted of two other people
- Me, Joe Luquettel, Jonathan Brophy
- Implementors/other aratar – we need to agree
- Rots-devel discussion group
- Lots and lots and lots of ingame talk
- Can't just make any change I want and implement it

Being an administrator

- Took up more time than expected
- Lots of cheaters
- Mostly High school students
- Small problems – forgotten password
- Imm gifts, newbie questions
- Stolen characters

Game balance

- Keeping objects/weapons/mobs/skills balanced all around
- Keeping players happy
- Not making things too powerful, or too weak
- Keeping both sides and all races of all classes happy
- Listening to players for ideas

Union's internet

- Can't hold a normal conversation
- Can't update/modify my CVS without taking a 30 minute break
- Had to go home a few weekends just so I could converse with other coders

CVS

- Concurrent versioning system
- Used for source control and the versioning of files
- Central repository of files, can be accessed by any client/user
- Users “checkout” the code, modify at will, then commit/check in the code (if they have write access) when repository is ready to be updated
- CVS is freely available on the web

Using CVS

- `cv`s checkout
- `cv`s update
- `cv`s log
- `cv`s diff – used for rots-devel group
- `patch < filename`
- `cv`s commit –m ""

Cosmetic changes

- Welcome screen (config.cc)
- Wizlist updates (lib/text/wizlist)
- Socials – “\$n tips \$s hat to \$mself...%e must be lonely.” (lib/misc/socials)

Bugs

- “show rent” used by immortals to list objects in a mortals position at rent time
- For some reason caused the game to crash at random times
- Troubleshooting, noticed it always happened with p(siagrim)
- Noticed it had to do with his backpack
- Backpack LOADED with waybread
- Too much bread?

A bug, continued

- Buffer overflow in the string
- MAX_STRING_LENGTH used to initialize the string variable, set at 8192
- Can't just simply increase the size
- Brings up a new issue I didn't have to think about much in my own (small) programs)

Efficiency

- MAX_STRING_LENGTH used all over the entire 72,000+ lines of code.
- Doubling MAX_STRING_LENGTH would double the amount of memory used while running, doesn't even "fix" the problem
- Must be more efficient, enter snprintf()
- The code

Other changes

- Increased the kick and swing damage (Act_offe.cc)
- Check whether object was key on decay checks in make_corpse() (fight.cc)
- Break-prep function created in spell_pa.cc, prototype in comm.h, included as extern function in act_othe.cc, clerics.cc, fight.cc

Other Changes, cont.

- Add 50 moves to tamed creatures, act_othe.cc, handler.cc
- Namechange now in syslog - db.cc, autorun

Many files to work with

- About 70 source files
- Grep – a great command
- Made guardian a specialization, orcs can't spec it, increased guardians stats/defense
 - act_othe.cc, act_offe.cc, mystic.cc, structs.h, consts.cc

Still in the works

- Pick lock – ready to use - don't want players to lock "bushes" or doors to inns (act_move.cc)
- Identify – gave too much info to mortals (mage.cc)
- Chill ray – balance issues (mage.cc)
- Plant healing bug (spec_pro.cc/more)

Future

- Continue on these small projects
- Clean up the code
- Work on our efficiency as a group with rots-devel, and cvs updates –(time/feature frequency, cvs head branch unstable/etc)
- Keep it balanced and enjoyable