Freeciv - Bug #764974

Trouble choosing defenders in military_advisor_choose_build()

2018-07-15 12:26 AM - Jacob Nevins

Status:	Closed		**Start date:**	
Priority:	Normal		**Due date:**	
Assignee:	Jacob Nevins		**% Done:**	0%
Category:	AI		**Estimated time:**	0.00 hour
Sprint/Milestone:	2.6.1			

Description

Looking at code added in [gna patch #5471](#) (debuting in 2.6):

```
/* Potential defender found */
if (urgency == 0
    && uchoice.value.utype->defense_strength == 1) {
  /* FIXME: check other reqs (unit class?) */
  if (get_city_bonus(pcity, EFT_HP_REGEN) > 0) {
    /* unlikely */
    uchoice.want = MIN(49, danger);
  } else {
    uchoice.want = MIN(25, danger);
  }
} else {
  choice->want = danger;    // ONE
}

uchoice.want += martial_value;

CITY_LOG(LOG_DEBUG, pcity, "m_a_c_d wants %s with desire " ADV_WANT_PRINTF,
         utype_rule_name(choice->value.utype),
         choice->want);     // TWO

if (!build_walls || uchoice.want > choice->want) {
  *choice = uchoice;
}
```

I was led to this code by a crash in the debug message TWO, where 'choice' is all zeroes. I'm pretty sure this debug message is intended to refer to 'uchoice'.

Looking nearby at ONE, I think referring to choice->want is a bug too and this should be uchoice.want?
I'm guessing that this makes AI cities a bit less likely to build defenders when under threat; partly because uchoice doesn't have its want bumped, and partly because it's competing with whatever's in 'choice', which **has** had its want (erroneously) bumped further.

History

#1 - 2018-07-15 01:00 PM - Jacob Nevins

- File 26-ai-threatened-choose-defender.patch added

- Status changed from New to Resolved

- Assignee set to Jacob Nevins

In later branches, the code is the way I thought it should be, except that TWO still refers to 'choice' but is after uchoice has potentially been copied to it. This bug affects S2_6 only.

So I'm more confident in changing the code, since presumably it's already been tested on later branches. (A review would still be nice though.)

Basically-untested patch attached (it does fix my debug crash).

#2 - 2018-07-15 02:16 PM - Marko Lindqvist

Jacob Nevins wrote:

> In later branches, the code is the way I thought it should be

The S2_6 code is likely result of an rebasing error (when patch was ported from later branches to S2_6 and it didn't apply cleanly)

#3 - 2018-07-22 12:46 AM - Jacob Nevins

- Status changed from Resolved to Closed

Files

26-ai-threatened-choose-defender.patch	1.55 KB	2018-07-15	Jacob Nevins