

DelayerM

Delayed Loading Mutators aiming UT'99 games

Description: This is one of tools which I needed nowadays when UT game has way more options compared with past years. While maps needs fixes, in some of them run-time patching might takes time due to their insane load with actors crashing games at iterations limits, several actors/mutators initialized too early while map is not patched yet might do some funky effects around this problem when things accessed by them are going NONE resulting in stupid errors based on Accessing these Nones which at a moment might be critical and other time fill logs with some spam messages.

In other case there are mutators which don't need to make a mess when level is being loaded, they can be loaded after 2-3 seconds without to cause any issue and without loading iterators which are defaulted when a Level is being loaded. We can fix Movers even after PreBeginPlay PostBeginPlay during first 2 seconds without having troubles by sending them into the right state and getting over old idea with InitialState prepared early. We can initialize a ScoreSaver without to start server with it, it can be loaded even later, and so on. Generally mutators which are not making a deal with game's initialization parameters might have a delay spreading the load from the begining and allowing a faster initialization.

How do it Works:

This is not really a big deal, mutator is creating an INI called **DelayedMuts.ini** if **DelayLoadTime** is found zero, usually when has no INI original delay is zero. In this ini file which can be created after first run or generating it using "Preferences" Menu-Command we can list there 64 **Actors/Mutators**

```
LaterMuts[0]=MAHelp.MATune
LaterMuts[1]=ipToCountry.LinkActor
LaterMuts[2]=SS.SS
...
LaterMuts[63]=
DelayLoadTime=3.000000
```

which needs to "get late". **DelayLoadTime** will be set in **seconds** using Sleep function available in a state code, yes, mutator uses a state code sleeping a bit before loading list.

As a last option before releasing it I did a small fine tuning to the code and adding a log for figuring functionality. Log shows if something loaded in server did not screwed up mutator's state.

A Real Sample: One of those nice maps called MH-LandsOfNapali doing pain when pawns were scanning routes to enemies made me to rewrite Paths Network in a more complete coverage and less load for Engine. This process takes visible time so... mutators based on Paths like Relics, SwarmSpawners, LessTele3 (trying preventing telefrag at match-start) might do some... not nice effects if they are initiated before completing newer Paths Network - screwing New Starts triggered in game. As result they can

be called later as long as they won't harm nothing when are loaded in post-patching stage, but not very late or else LessTele3 won't work after starting game and you can have original telefrag problem, mutator going useless.

Tech Note: This mutator is done in **two copies** in case of usage for some multi-server when not all stuff has to be loaded all time, MonsterHunt is not really a DeathMatchPlus speaking about mutators used. If we take in account that these **DelayerM** mutators are not participating at game but they do a server task by loading others, they **don't have** to be placed as ServerPackages because this doesn't make any sense, but those from the list must be or not in ServerPackages accordingly - relics here. They can be used in MapVote's ini in a last position because aren't a high priority. Both of them will work in the same said INI file, there is not a need for a mountain of files after all.