

Fighting doubling bugs

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Easiest way: **Don't update your mods while using a savegame.**

Okay, that way may be quite dumb.. so here are some solutions.

The Morrowind File Data splits into three different kinds of files:

- esm-data (mainfiles, containing objects and references)
- esp-data (plugins, containing objects and references)
- ess-data (savegames, containing references only)

Each is loaded and compiled separately, the lower overriding the upper.

From the point of a developer this makes perfectly sense: ess-data is newer as esp-data, which is newer than esm-data.

Data is processed as the newer data overriding and substituting the older one.

Period. That was done with Morrowind.

The processing sequence for Morrowind Data is:

- loading esm
- no checking at all, just simply altering objects and adding(!) references
- loading esp
- checking wether an esp has all loaded esm referenced correctly
- giving an errormessage if they are not
- loading ess
- checking wether an ess has all loaded esm and esp referenced correctly
- giving an errormessage if they are not

This works nicely.. you load the esms, overwrite identical entries with esps, finally overwriting them again with ess.

If some files of the same priority modify the **same** object, only the most recent change will take effect. So newer esms overwrite older esms, newer esps overwrite older esps and older esms and newer ess overwrite all older files. Heed the warning, that esms do not overwrite older esms in respect of references. Objects only.

If an esp has not referenced all esms, there will be an error, which can be fixed by loading the esp into the TESCS along with all needed esms and resave it. Conflicts will be pointed out, and therefore can be fixed,

so the esp is running fully compatible with all the esms.

If an ess has not referenced all esms and esps, there will be an error, too, but that is not fixed that easy. But mostly the references stored in the ess will not conflict with the game, as it only stores changes done to specific things (npcs, items, journal,...), not adding objects to the world or modifying objects in the world.

With one exception.

It stores the position of any moved item as a reference (safe statics, for they shouldn't be moved ingame). They can be moved by the player (items, non-teleporting doors) or move themselves around (NPCs, creatures).

If you update an esp or esm (any esp or esm) or add an esp or esm (any esp or esm) and use your old ess all esp-data will be counted "newer" as the ess-data. But ess-data is processed after loading the esm and esp-data. So the ess/esp-references cannot be overridden by the ess-references for the esm/esp-objects are "newer" than the ess-references to them. The game will add a double and there will be a much discussed bug called "doubling":

