

CTF-Hydro16

Patching component for NavAdder 2 mutator addressing game UT'99 + XC_Engine v24

Description:

This file is used by **NavAdder v2** mutator for patching jobs in Map called **CTF-Hydro16.unr** for games of type CTFGame (aka Capture The Flag), made by **Sidney 'Clawfist' Rauchberger** as it shows LevelInfo.

Map's File Checksums:

File: CTF-Hydro16.unr

CRC-32: D27118B0

MD5: E2F02E754E1F59012960644DC8018A80

SHA-1: B5240E93A92F5869E97F7897DCC0AE4066EDDBF3

SHA-256: CE337C801E94B5A548BB7D53742B69755F9F45779636CBBAA460448CCF06BA00

Patch Notes:

Map has PathNodes placed in high spots over ramps (stairs) possible to develop seldom flaws - running in place unable to get properly at these PathNodes similar to stock map CTF-Command or maybe not - no risk taken this time. Map has 280 ReachSpecs missing from their paths lists.

LostData: ReachSpecs missing from Paths[0-15]	= 210.
LostData: ReachSpecs missing from upStreamPaths[0-15]	= 70.

Plugin will do a few corrections:

- Defragmenting Paths and Remapping them;
- Lift Combos and the rest of combos are reduced as Paths-Lenght and ExtraCost because there is not needed any high cost for them and Paths through these points are not having a real distance of 1000 UU (500+500) as UT Stock is claiming with hard-coded values...

```
if ( node->IsA(ALiftCenter::StaticClass()) )
{
    FName myLiftTag = ((ALiftCenter *)node)->LiftTag;
    for (INT i=0; i<Level->Actors.Num(); i++)
    {
        AActor *Actor = Level->Actors(i);
        if ( Actor && Actor->IsA(ALiftExit::StaticClass()) && ((ALiftExit *)Actor)->LiftTag == myLiftTag )
        {
            newSpec.Init();
            newSpec.CollisionRadius = 60;
            newSpec.CollisionHeight = 60;
            newSpec.reachFlags = R_SPECIAL;
            newSpec.Start = node;
            newSpec.End = Actor;
            newSpec.distance = 500;
            int pos = insertReachSpec(node->Paths, newSpec);
            if (pos != -1)
            {
                int iSpec = Level->ReachSpecs.AddItem(newSpec);
                node->Paths[pos] = iSpec;
                pos = insertReachSpec(((ANavigationPoint *)Actor)->upstreamPaths, newSpec);
                if (pos != -1)
                    ((ANavigationPoint *)Actor)->upstreamPaths[pos] = iSpec;
            }
            newSpec.Init();
            newSpec.CollisionRadius = 60;
            newSpec.CollisionHeight = 60;
            newSpec.reachFlags = R_SPECIAL;
            newSpec.Start = Actor;
            newSpec.End = node;
            newSpec.distance = 500;
            pos = insertReachSpec(((ANavigationPoint *)Actor)->Paths, newSpec);
            if (pos != -1)
            {
                int iSpec = Level->ReachSpecs.AddItem(newSpec);
                ((ANavigationPoint *)Actor)->Paths[pos] = iSpec;
                pos = insertReachSpec(node->upstreamPaths, newSpec);
                if (pos != -1)
                    node->upstreamPaths[pos] = iSpec;
            }
        }
    }
    return;
}
```

this way causing Pawns to use these paths more intensive due to distance+cost calculations operated by the same Unreal Engine v1;

- Rotated two DefensePoint actors in Red Base;
- Lowering PathNodes that are way too high from navigable ground.

Explained files:

File **SS_NVADCTF-HYDRO16.u** is a server-side plugin file, not a mutator, it's working around authoritative pathing parts automatically lunched by NavAdder Update 2.

Installation:

Copy U file in System Folder from UT install where mutator NavAdder v2 was previously placed and is active. NavAdder v2 will find it and will load it when map is being loaded. Patch plugin is goes active by itself. If it's not needed any longer to patch map or map used it's another fixed version, just remove/move/delete this U plugin-type file.

The reminder:

NavAdder uses these plugin type files if are found and will not cry for them if are removed later (bugs reasons or whatever reasons). When other map is running, these files can be removed or replaced and then server will have an update or update removed without being re-started/stopped.

These features are **available ONLY IN PRESENCE OF XC_ENGINE at least v24 and higher**. Main Mutator using this plugin will **crash** a **plain server** because the default UE1 doesn't use newer XC iterators because it's not having them - it was year 1999.

Plugins mainly cannot be compiled with stock UT which has hilarious constants and compiler specific "rules" making impossible compiling of several fixes which are doable without damaging anything.