
Subject: WeaponBag

Posted by [Neijwiert](#) on Sat, 30 Nov 2013 17:29:39 GMT

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FIXED IT

There seems to be something wrong with the WeaponBagClass.

I have a situation where I select the most optimal weapon for a bot against a certain object. Everytime I have the exact same set-up, yet on some occasions the WeaponBagClass::Get_Count() returns 0. However I can see the weapon on the actual soldier in-game and it's the exact same soldier preset and everything I had before.

I do call my function multiple times, so it's not like those usual problems that you have to wait x time after creation to do y.

I can provide my whole code, so you guys can recreate this problem if you can't identify it in my code.

Toggle Spoiler

```
WeaponClass *NTC_AI::Select_Effective_Weapon(GameObject *Target, int &Status)
```

```
{  
    if(!Target)  
    {  
        Status = NO_WEAPON_FOUND;  
        return 0;  
    }  
}
```

```
DamageableGameObj *DTarget = Target->As_DamageableGameObj();
```

```
if(!DTarget)  
{  
    Status = NO_WEAPON_FOUND;  
    return 0;  
}
```

```
DefenseObjectClass *DefTarget = DTarget->Get_Defense_Object();
```

```
if(!DefTarget)  
{  
    Status = NO_WEAPON_FOUND;  
    return 0;  
}
```

```
PhysicalGameObj *PObj = Owner()->As_PhysicalGameObj();
```

```
if(!PObj)  
{  
    Status = NO_WEAPON_FOUND;  
    return 0;  
}
```

```

ArmedGameObj *ArmedObj = PObj->As_ArmedGameObj();
if(!ArmedObj)
{
    Status = NO_WEAPON_FOUND;
    return 0;
}

WeaponBagClass *Bag = ArmedObj->Get_Weapon_Bag();
if(!Bag)
{
    Status = NO_WEAPON_FOUND;
    return 0;
}

unsigned int ArmorType = DefTarget->Get_Skin();
if(DefTarget->Get_Shield_Strength() > DefTarget->Get_Health())
    ArmorType = (unsigned int)DefTarget->Get_Shield_Type();

float HighestDamage = 0;
int WeaponIndex = -1;
bool WasSecondary = false;
float HighestWeaponRange = 0;

float Distance = Commands->Get_Distance(Commands->Get_Position(Owner()),
Commands->Get_Position(Target));

int WeaponCount = Bag->Get_Count();
for(int x = 0; x < WeaponCount; x++)
{
    Console_Output("looping trough a weapon\n");
    WeaponClass *Weapon = Bag->Peek_Weapon(x);
    if(Weapon && Weapon->Get_Clip_Rounds() + Weapon->Get_Inventory_Rounds() > 0)
    {
        Console_Output("Got a weapon and ammo\n");
        AmmoDefinitionClass *PrimaryAmmo =(AmmoDefinitionClass
*)DefinitionMgrClass::Find_Definition(Weapon->Get_Definition()->PrimaryAmmoDefID, false);
        AmmoDefinitionClass *SecondaryAmmo = (AmmoDefinitionClass
*)DefinitionMgrClass::Find_Definition(Weapon->Get_Definition()->SecondaryAmmoDefID, false);

        float CurrentHighestDamage = 0;
        bool Secondary = false;

        if(PrimaryAmmo)
        {
            if(PrimaryAmmo->Range >= Distance)
                CurrentHighestDamage = ArmorWarheadManager::Get_Damage_Multiplier(ArmorType,
PrimaryAmmo->Warhead) * PrimaryAmmo->Damage;

```

```

if(PrimaryAmmo->Range > HighestWeaponRange)
    HighestWeaponRange = PrimaryAmmo->Range;
}

if(SecondaryAmmo)
{
    if(SecondaryAmmo->Range >= Distance)
    {
        float SecondaryDamage = ArmorWarheadManager::Get_Damage_Multiplier(ArmorType,
SecondaryAmmo->Warhead) * SecondaryAmmo->Damage;
        if(SecondaryDamage > CurrentHighestDamage)
        {
            Secondary = true;
            CurrentHighestDamage = SecondaryDamage;
        }
    }
}

if(SecondaryAmmo->Range > HighestWeaponRange)
    HighestWeaponRange = SecondaryAmmo->Range;
}

if(CurrentHighestDamage > HighestDamage)
{
    HighestDamage = CurrentHighestDamage;
    WeaponIndex = x;
    WasSecondary = Secondary;
}
}
}

if(WeaponIndex != -1)
{
    WeaponClass *Weapon = Bag->Peek_Weapon(WeaponIndex);
    if(Weapon)
    {
        if(WasSecondary)
            Status = WEAPON_SECONDARY;
        else
            Status = WEAPON_PRIMARY;

        Console_Output("A\n");
        return Weapon;
    }
    else
    {
        Console_Output("B\n");
        Status = NO_WEAPON_FOUND;
    }
}

```

```
    return 0;
}
}
else
{
if(HighestWeaponRange < Distance)
{
    Console_Output("C\n");
    Status = OUT_OF_WEAPON_RANGE;
    return 0;
}
else
{
    Console_Output("D\n");
    Status = NO_WEAPON_FOUND;
    return 0;
}
}
}
```

Subject: Re: WeaponBag
Posted by [Neijwiert](#) on Sat, 30 Nov 2013 17:48:21 GMT
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Ok, I fixed it. It was really stupid of me not to think of this.

There was a combination of something going wrong with copying the DLL, thus not displaying the debug messages. Which made me believe that the for loop never was fired.

Now the problem was that whenever I gave myself a Blamo skin/armour . The calculated damage of the gun would then result 0 and would never be higher than the initial highest damage. Which would result in never assing WeaponIndex another value.

So to fix it, if anybody wants to know.

Change

```
float HighestDamage = 0;
```

To

```
float HighestDamage = -1;
```

Subject: Re: WeaponBag

Posted by [danpaul88](#) on Sat, 30 Nov 2013 18:58:59 GMT

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Of course ,the most effective weapon might be one for which you have limited ammo and this sort of scripting would go ahead and waste that ammo on free rifle infantry or engineers and leave the bot with a less effective weapon when it comes face to face with a vehicle or advanced infantry unit.

Really you need some way to evaluate the "threat level" of the target to decide if you really should be using your limited ammo top tier weapons or just stick with something slightly less effective but less limited on the ammo front.

Subject: Re: WeaponBag

Posted by [Neijwiert](#) on Sun, 01 Dec 2013 12:03:58 GMT

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danpaul88 wrote on Sat, 30 November 2013 11:58Of course ,the most effective weapon might be one for which you have limited ammo and this sort of scripting would go ahead and waste that ammo on free rifle infantry or engineers and leave the bot with a less effective weapon when it comes face to face with a vehicle or advanced infantry unit.

Really you need some way to evaluate the "threat level" of the target to decide if you really should be using your limited ammo top tier weapons or just stick with something slightly less effective but less limited on the ammo front.

That's a really good idea, I haven't thought about that. But for the purposes I'm using it for it's fine. It's merely a simple improvement on the standard AI. And chances of coming across an actual vehicle aren't that big.
