

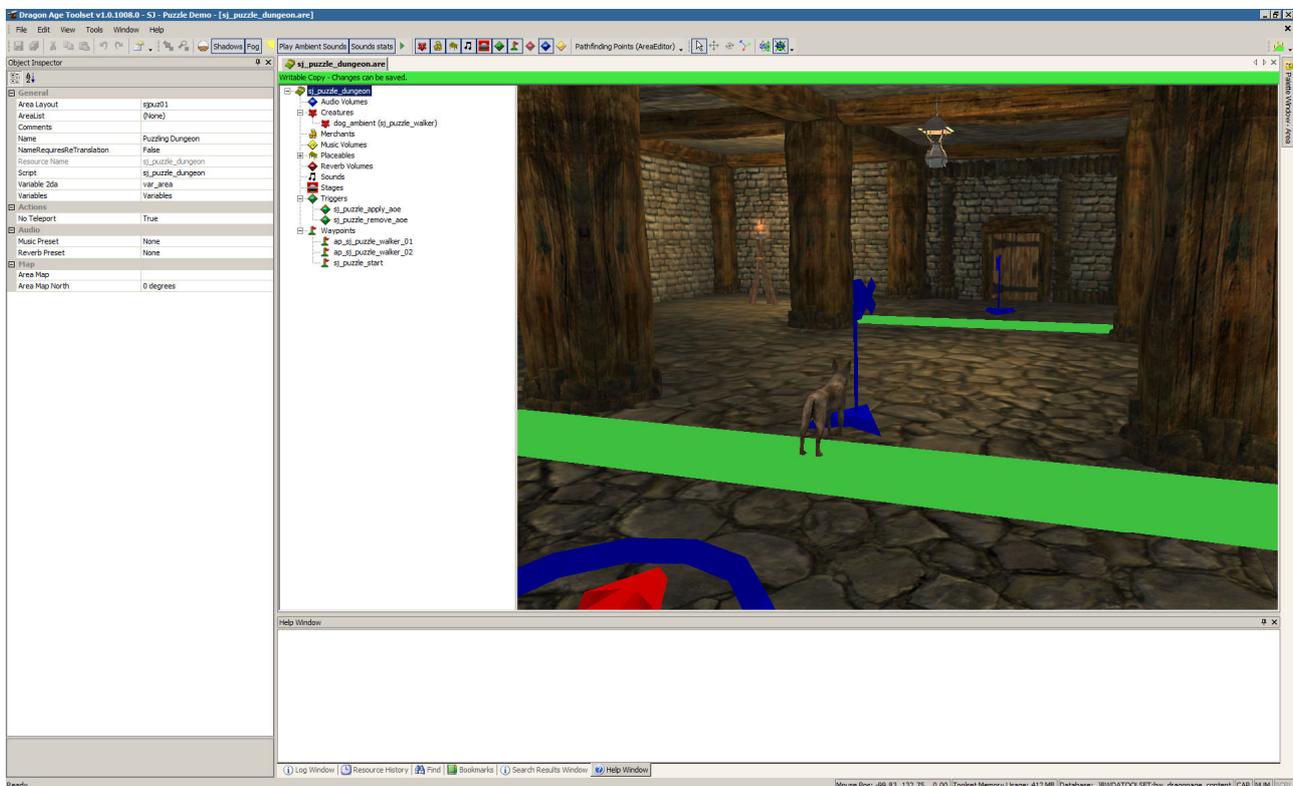
The following is a rough guide to creating a Area of Effect surrounding a moving creature that the Player must remain within or die!

Area Set Up

The area was set up as follows:

- 2 triggers
 - tag = `sj_puzzle_apply_aoe` (the activating trigger)
 - tag = `sj_puzzle_remove_aoe` (the deactivating trigger)
- 1 creature to act as the walker, i.e. the creature the Player must remain close to
 - tag = `sj_puzzle_walker`
- 2 waypoints to show the start and finish points
 - tag = `ap_sj_puzzle_walker_01` (beyond the activating trigger)
 - tag = `ap_sj_puzzle_walker_02` (beyond the deactivating trigger)

Once set up the test area looked like this:



Plot

A plot was created with two Main flags to control the behaviour. The main reason for doing this is that when an AOE is removed any creatures still within its radius will trigger the "exit" event. Obviously once the Player has reached a certain point we want them to be able to leave the AOE without dying.

The plot was called `sj_puzzle_aoe` and the flags were:

- `SJ_PUZZLE_AOE_ACTIVATED`
- `SJ_PUZZLE_AOE_DEACTIVATED`

Activating Trigger Script

When the Player enters the activating trigger it creates an area of effect and applies it to the creature that the Player has to stay close to: the Walker. It then activates the ambient system on the creature to make it walk a pre-defined patrol.

```
//-----  
//  sj_puzzle_apply_aoe  
//-----  
/*  
    Trigger event script to apply an area of effect on a creature and set it walking an ambient  
    patrol.  
*/  
//-----  
/*  
    Created: 05 Dec 2010 - Sunjammer  
*/  
//-----  
#include "wrappers_h"  
#include "plt_sj_puzzle_aoe"  
  
//-----  
//  CONSTANTS  
//-----  
  
const int AOE_TEST_RADIUS_03    = 1;    // 3m radius  
const int AOE_TEST_RADIUS_10    = 2;    // 10m radius  
  
//-----  
//  MAIN  
//-----  
  
void main()  
{  
    int bEventHandled;  
  
    // common variables  
    object oHero = GetHero();  
  
    // deconstruct event  
    event evCurrent = GetCurrentEvent();  
    int nEventType = GetEventType(evCurrent);  
  
    //-----  
    //  Handle Specific Events  
    //-----  
  
    switch(nEventType)  
    {  
        case EVENT_TYPE_ENTER:  
        {  
            // has the AOE been activated?  
            if(!WR_GetPlotFlag(PLT_SJ_PUZZLE_AOE, SJ_PUZZLE_AOE_ACTIVATED))  
            {  
                // is the creature entering the trigger the Player?  
                object oCreature = GetEventCreator(evCurrent);  
                if(IsHero(oCreature))  
                {  
                    // obtain a reference to the creature that we must stay close too  
                    object oWalker = GetObjectByTag("sj_puzzle_walker");  
  
                    // create a 3m AOE and apply it to the walker  
                    effect eAOE = EffectAreaOfEffect(AOE_TEST_RADIUS_03, R"sj_puzzle_aoe.ncs");  
                    Engine_ApplyEffectOnObject(EFFECT_DURATION_TYPE_PERMANENT, eAOE, oWalker);  
  
                    // start the walker walking  
                    SetLocalInt(oWalker, "AMBIENT_MOVE_PATTERN", 1);  
                    SetLocalInt(oWalker, "AMBIENT_SYSTEM_STATE", 1);  
  
                    // set a flag to show that the AOE has been activated  
                    WR_SetPlotFlag(PLT_SJ_PUZZLE_AOE, SJ_PUZZLE_AOE_ACTIVATED, TRUE);  
                }  
            }  
        }  
  
        break;  
    }  
}
```

```

    }
}

//-----
// Unhandled Events
//-----

if(!bEventHandled)
{
    HandleEvent(evCurrent, RESOURCE_SCRIPT_TRIGGER_CORE);
}
}

```

Deactivating Trigger Script

When the "walker" enters the deactivating script while the AOE is active it will deactivate the AOE without harming the Player. This means that the Player will risk dying if when he moves away from the "walker".

```

//-----
// sj_puzzle_remove_aoe
//-----
/*
    Trigger event script to remove an area of effect from a creature.
*/
//-----
/*
    Created: 05 Dec 2010 - Sunjammer
*/
//-----
#include "wrappers_h"
#include "plt_sj_puzzle_aoe"

void main()
{
    int bEventHandled;

    // common variables
    object oHero = GetHero();

    // deconstruct event
    event evCurrent = GetCurrentEvent();
    int nEventType = GetEventType(evCurrent);

    //-----
    // Handle Specific Events
    //-----

    switch(nEventType)
    {
        case EVENT_TYPE_ENTER:
        {
            // has the AOE been activated but not yet deactivated?
            if(WR_GetPlotFlag(PLT_SJ_PUZZLE_AOE, SJ_PUZZLE_AOE_ACTIVATED)
            && !WR_GetPlotFlag(PLT_SJ_PUZZLE_AOE, SJ_PUZZLE_AOE_DEACTIVATED))
            {
                // is the creature entering the trigger the walker?
                object oCreature = GetEventCreator(evCurrent);
                if(GetTag(oCreature) == "sj_puzzle_walker")
                {
                    // set a flag to show that the AOE has been deactivated
                    // NOTE: do this before removing the effect or the it will kill the player
                    WR_SetPlotFlag(PLT_SJ_PUZZLE_AOE, SJ_PUZZLE_AOE_DEACTIVATED, TRUE);

                    // remove the aoe
                    RemoveEffectsByParameters(oCreature, EFFECT_TYPE_AOE);
                }
            }

            bEventHandled = TRUE;
            break;
        }
    }
}

//-----

```

```

// Unhandled Events
//-----

if(!bEventHandled)
{
    HandleEvent(evCurrent, RESOURCE_SCRIPT_TRIGGER_CORE);
}
}

```

Area of Effect Script

If the Player leaves the Area of Effect, i.e. strays too far from the creature he is supposed to be staying close to, while the Area of Effect is active the Player dies.

```

//-----
// sj_puzzle_aoe
//-----
/*
Area of Effect (AOE) event script for a deadly AOE which the Player must remain within until
reaching a safe zone where it is deactivated.
*/
//-----
/*
Created: 05 Dec 2010 - Sunjammer
*/
//-----
#include "wrappers_h"
#include "plt_sj_puzzle_aoe"

void main()
{
    int bEventHandled;

    // common variables
    object oHero = GetHero();

    // deconstruct event
    event evCurrent = GetCurrentEvent();
    int nEventType = GetEventType(evCurrent);

    //-----
    // Handle Specific Events
    //-----

    switch(nEventType)
    {
        case EVENT_TYPE_EXIT:
        {
            // debug to show creator and target (remove from final)
            DisplayFloatyMessage(oHero, "exit.creator=" + GetTag(GetEventCreator(evCurrent)));
            DisplayFloatyMessage(oHero, "exit.target=" + GetName(GetEventTarget(evCurrent)));

            // is the creature leaving the AOE the Player?
            object oTarget = GetEventTarget(evCurrent);
            if(IsHero(oTarget))
            {
                // if the AOE has not been deactivated then leaving the AOE is fatal
                if(!WR_GetPlotFlag(PLT_SJ_PUZZLE_AOE, SJ_PUZZLE_AOE_DEACTIVATED))
                {
                    effect eDeath = Effect(EFFECT_TYPE_DEATH);
                    ApplyEffectOnObject(EFFECT_DURATION_TYPE_INSTANT, eDeath, oTarget);
                }
            }

            bEventHandled = TRUE;
            break;
        }
    }

    //-----
    // Unhandled Events
    //-----

    if(!bEventHandled)
    {
        HandleEvent(evCurrent, RESOURCE_SCRIPT_AOE_CORE);
    }
}

```

} }