GALACTIC
REIGN
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Overview

- How the System Works
- How the System Managed
- How the Game is Animated

HOW THE SYSTEM WORKS

How the System Works

THE 2D GAME

EXIT
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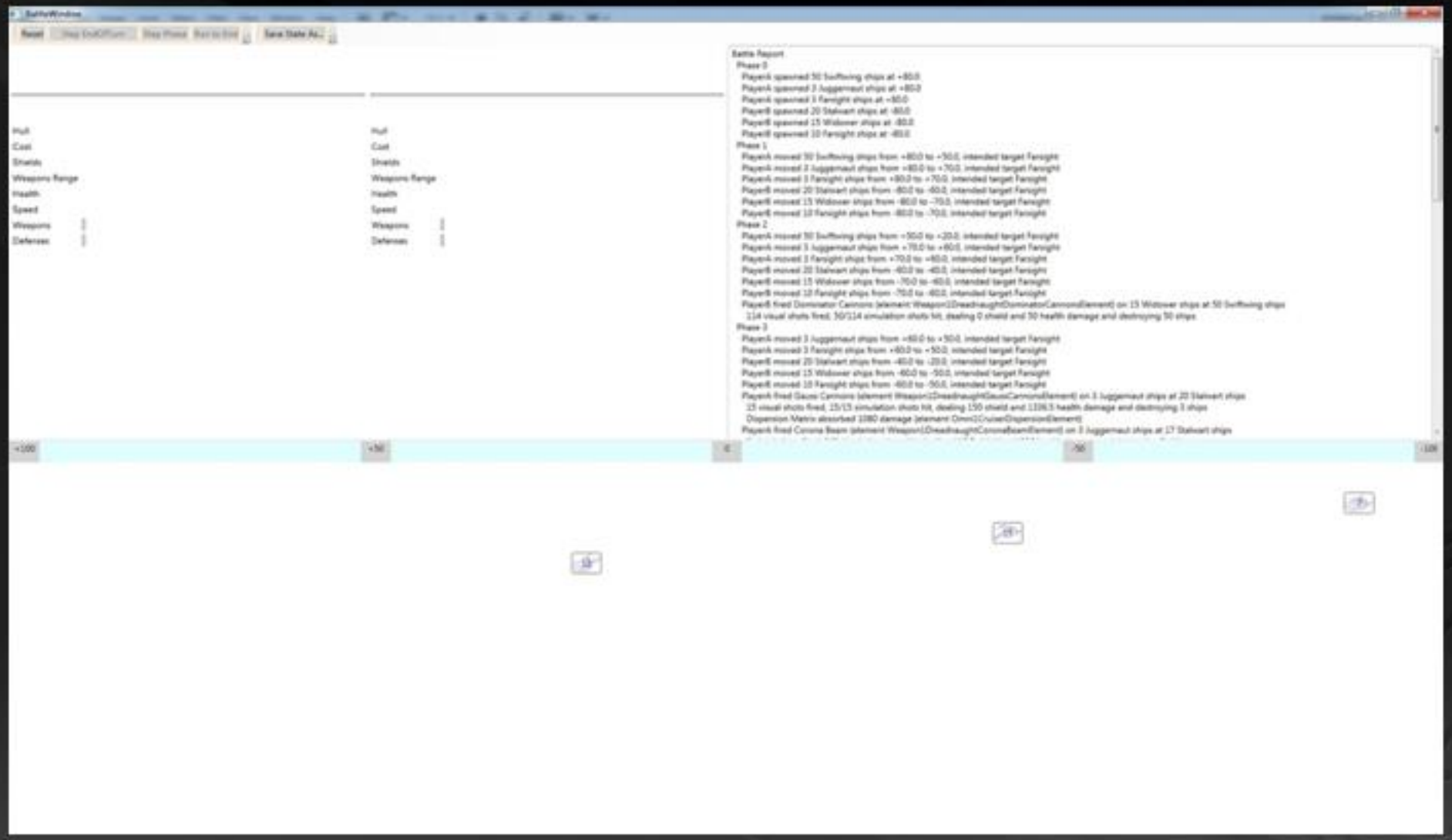
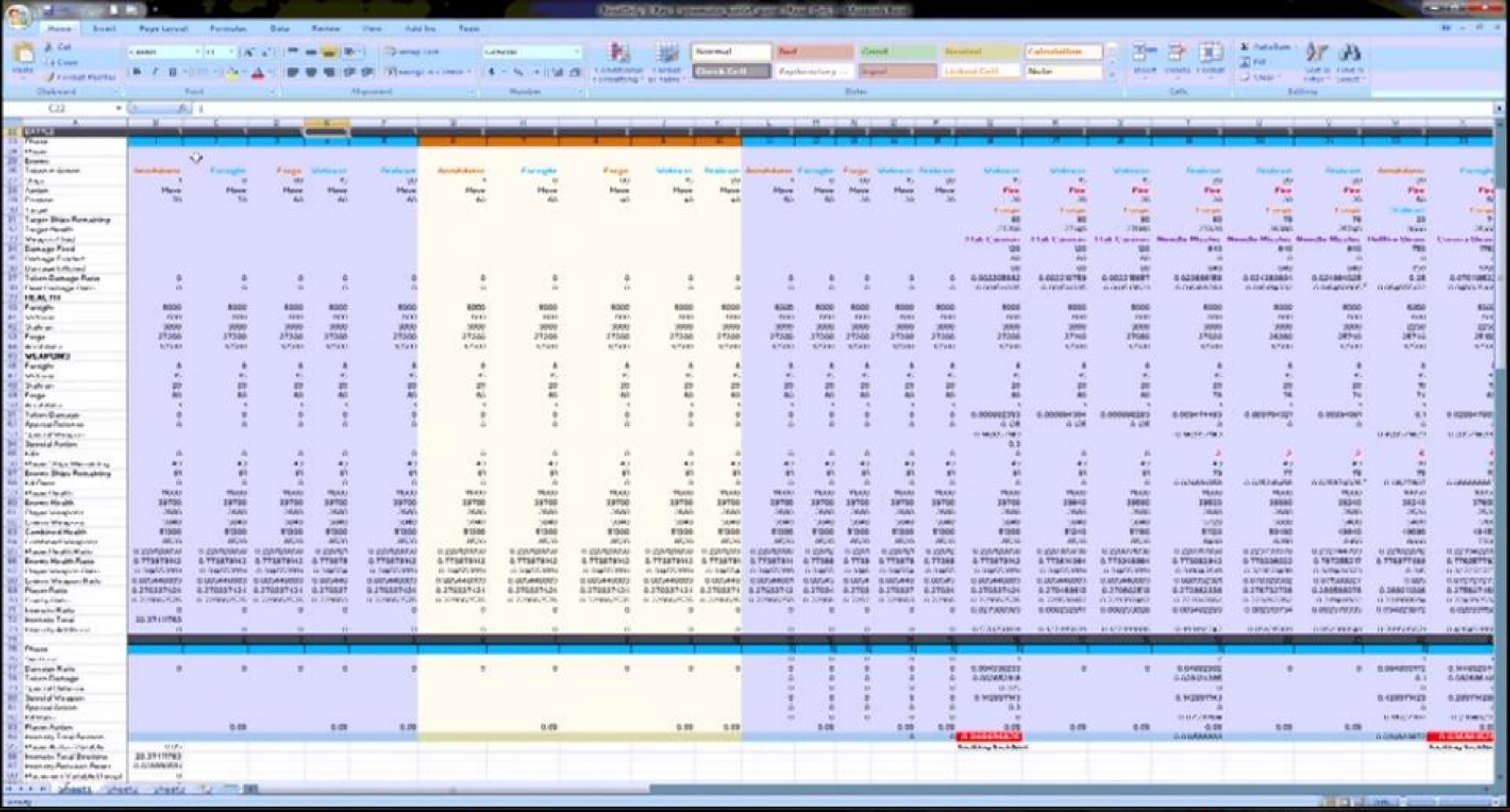
PHASE 1
PHASE 2
PHASE 3
Collect underpants
?
Profit

Holodeck


Reset
Save State As...
Hull
Cost
Shields
Weapons Range
Health
Speed
Weapons
Defenses
Hull
Cost
Shields
Weapons Range
Health
Speed
Weapons
Defenses
Battle Report
Phase 0
Phase 1
Phase 2
Phase 3

How the System Works

SHOT PLANNING & CREATION



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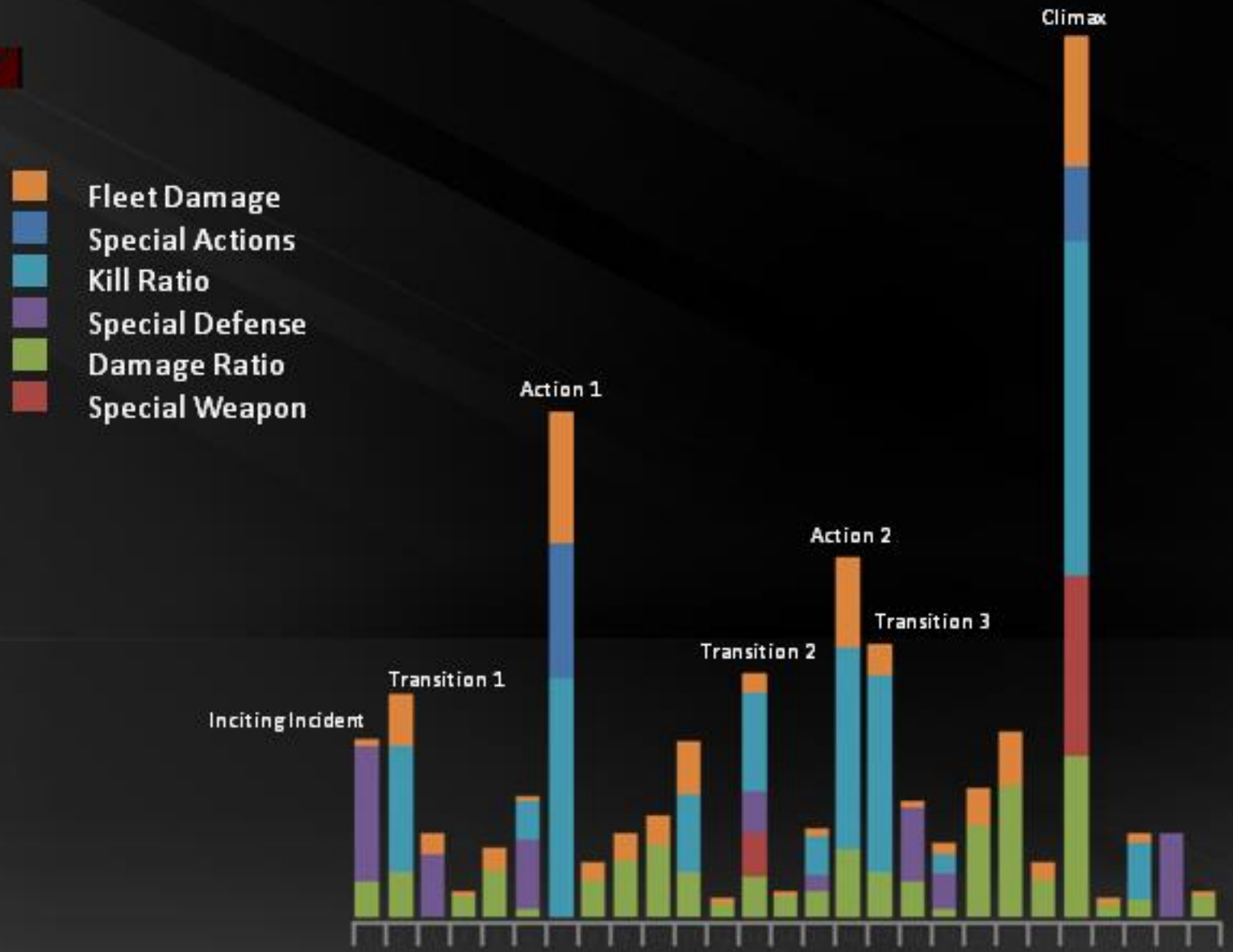
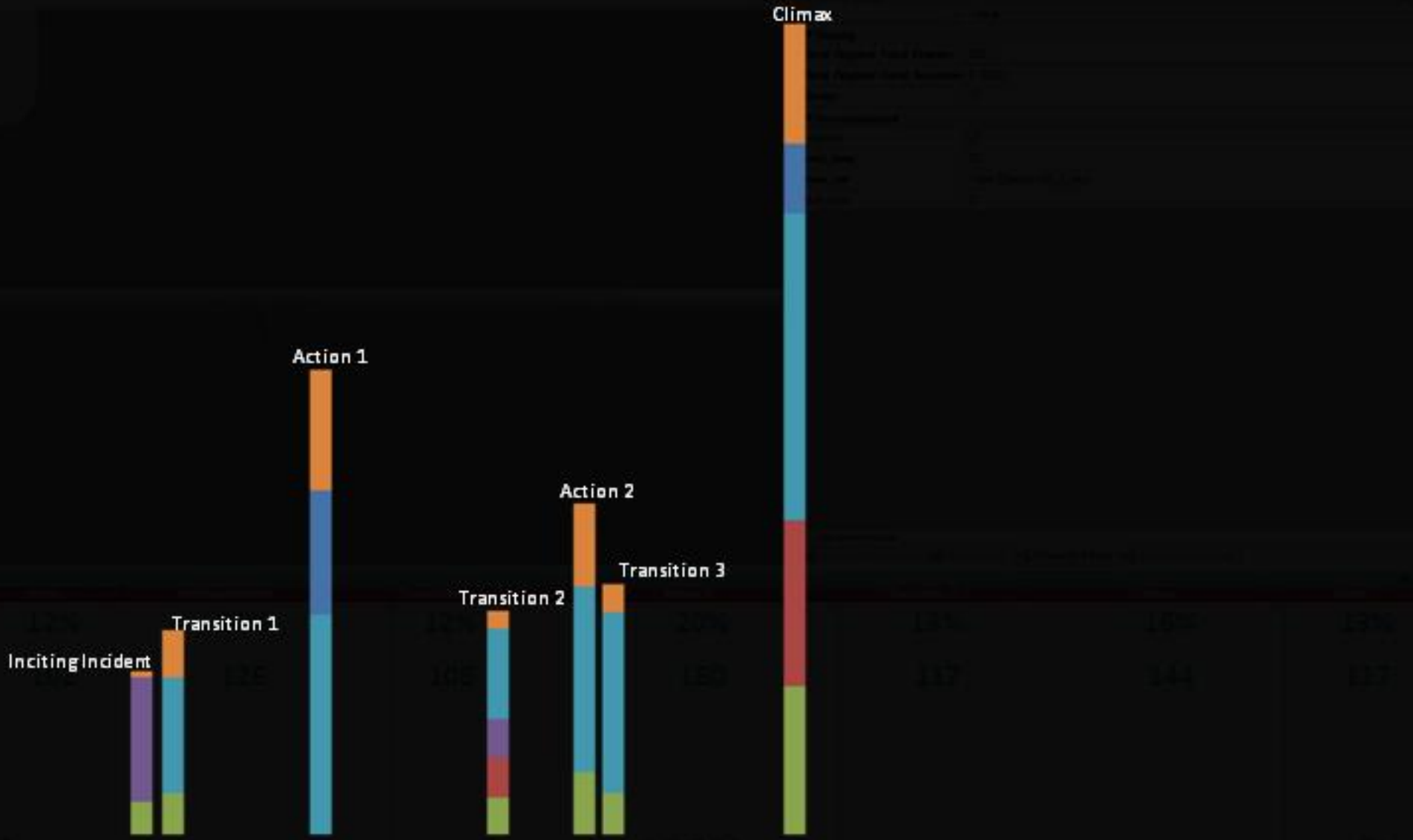
Data Parsing Issues

- Overall the parsing system worked, but not to the full extent we intended.
- Map emotional graph to:
- Lighting styles
- Camera angles
- Action selection.
- Read the overall game progress and take into context.

The Classic Story Formula

```
<?xml version="1.0"?>
<BattleScript xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" ScriptVersionNumber="7">
 <FleetDescriptions>
  <FleetDescription PlayerID="Player A" Species="0">
   <TokenDescriptions>
    <TokenDescription TokenID="Token_1e47377f-d317-4491-b600-24c11bd62157" Hull="Striker" HullVariation="1" InitialPopulation="282">
     <Attachments>
      <AttachmentDescription Name="Light Flak Cannon" Category="Ballistic" ModelName="Striker_ballistic_light" />
     </Attachments>
    </TokenDescription>
    <TokenDescription TokenID="Token_3c92c546-2065-442c-8c80-829c487c77cb" Hull="Destroyer" HullVariation="2" InitialPopulation="80">
     <Attachments>
      <AttachmentDescription Name="Thresher Flak Cannons" Category="Ballistic" ModelName="Destroyer_ballistic_light" />
      <AttachmentDescription Name="Cloaking Device" Category="Cloaking" ModelName="Special" />
     </Attachments>
    </TokenDescription>
    <TokenDescription TokenID="Token_b02e3350-e67c-404b-af98-59c83464091" Hull="Cruiser" HullVariation="0" InitialPopulation="10">
     <Attachments>
      <AttachmentDescription Name="Hard-Light Beams" Category="Beam" ModelName="Cruiser_beam_light" />
      <AttachmentDescription Name="Damage Amplifier" Category="DamageBoost" ModelName="Special" />
      <AttachmentDescription Name="Defensive Warp" Category="Warping" ModelName="Special" />
     </Attachments>
    </TokenDescription>
    <TokenDescription TokenID="Token_41e5c2ad-e72d-4c08-87c5-bcde5e755084" Hull="Battleship" HullVariation="1" InitialPopulation="3">
     <Attachments>
      <AttachmentDescription Name="Corona Beam" Category="Beam" ModelName="Turret_beam_heavy" />
      <AttachmentDescription Name="Gauss Cannons" Category="Ballistic" ModelName="Turret_ballistic_heavy" />
      <AttachmentDescription Name="Cloaking Device" Category="Cloaking" ModelName="Special" />
      <AttachmentDescription Name="Damage Amplifier" Category="DamageBoost" ModelName="Special" />
      <AttachmentDescription Name="Hard-Light Shield" Category="Shield" ModelName="Special" />
     </Attachments>
    </TokenDescription>
   </TokenDescriptions>
  </FleetDescription>
  <FleetDescription PlayerID="Player B" Species="2">
   <TokenDescriptions>
    <TokenDescription TokenID="Token_356cbb8b-e11e-4704-b8e1-d441d1c33e96" Hull="Battleship" HullVariation="1" InitialPopulation="2">
     <Attachments>
      <AttachmentDescription Name="Spike Missiles" Category="Missile" ModelName="Turret_missile_light" />
      <AttachmentDescription Name="Spike Missiles" Category="Missile" ModelName="Turret_missile_light" />
      <AttachmentDescription Name="Energy Shield" Category="Shield" ModelName="Special" />
      <AttachmentDescription Name="Hardened Shield" Category="Shield" ModelName="Special" />
```


Fleet Damage
Special Actions
Kill Ratio
Special Defense
Damage Ratio
Special Weapon
Climax
Action 1
Action 2
Transition 3
Transition 2
Transition 1
Inciting Incident


Climax
Action 1
Action 2
Transition 3
Transition 2
Transition 1
Inciting Incident

How the System Works

CINEMATIC GAME ENGINE

Direct X 11

Packaging

Tool Suite

Initialization

HEXANE®
GAME ENGINE

The Cloud

- Cloud Operation
- Cloud Configuration
- Cloud File Serving

Windows Azure

Art Content

- Ships
- VFX
- Environments
- Post Effects

Rendering & Encoding

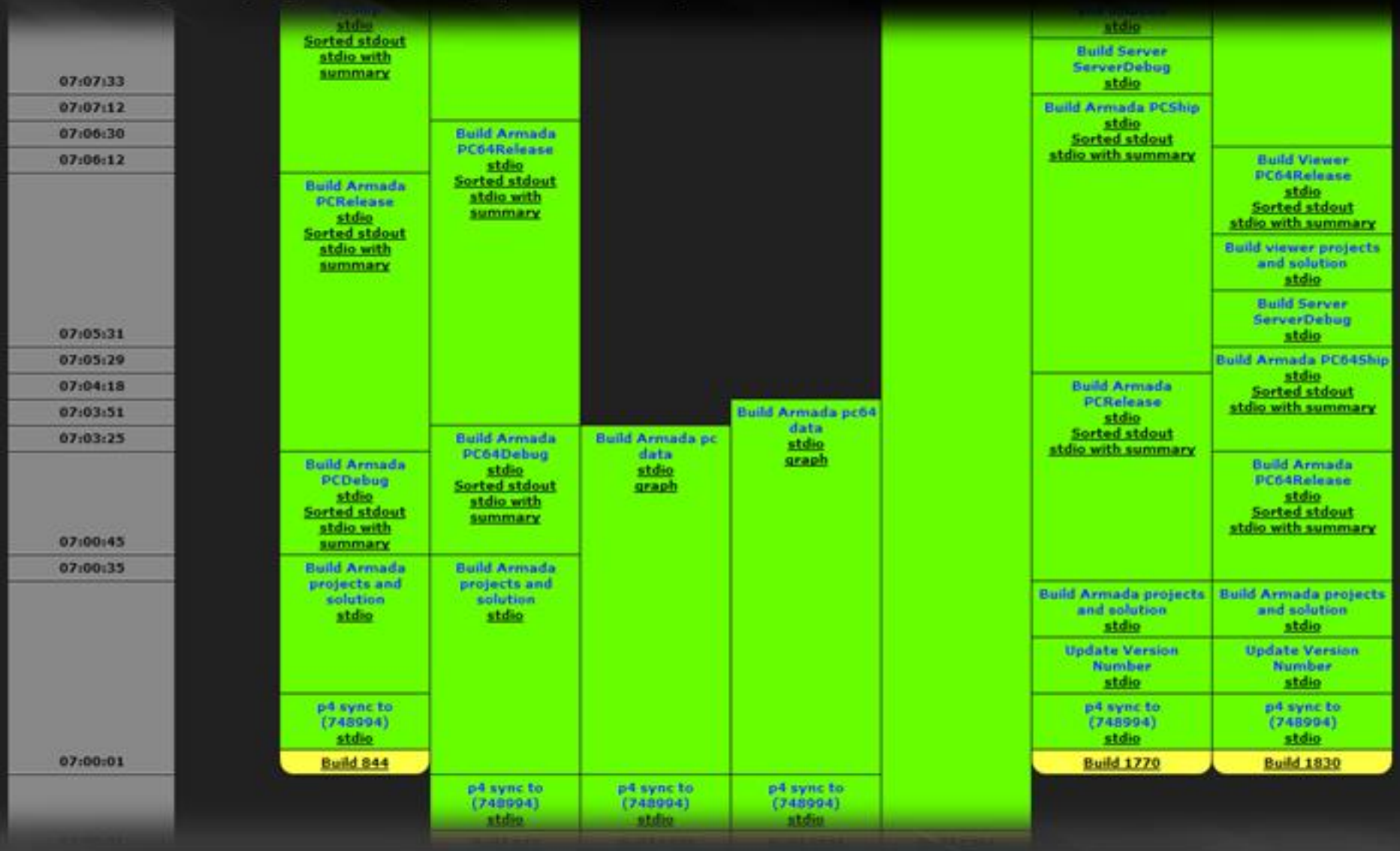
Microsoft® DirectX® 11

- Audio Mixing
- Pre/Post Roll
- Encoding & Delivery

HOW THE SYSTEM MANAGED

Build Waterfall Page

Check In & Build



Email / Physical Notification

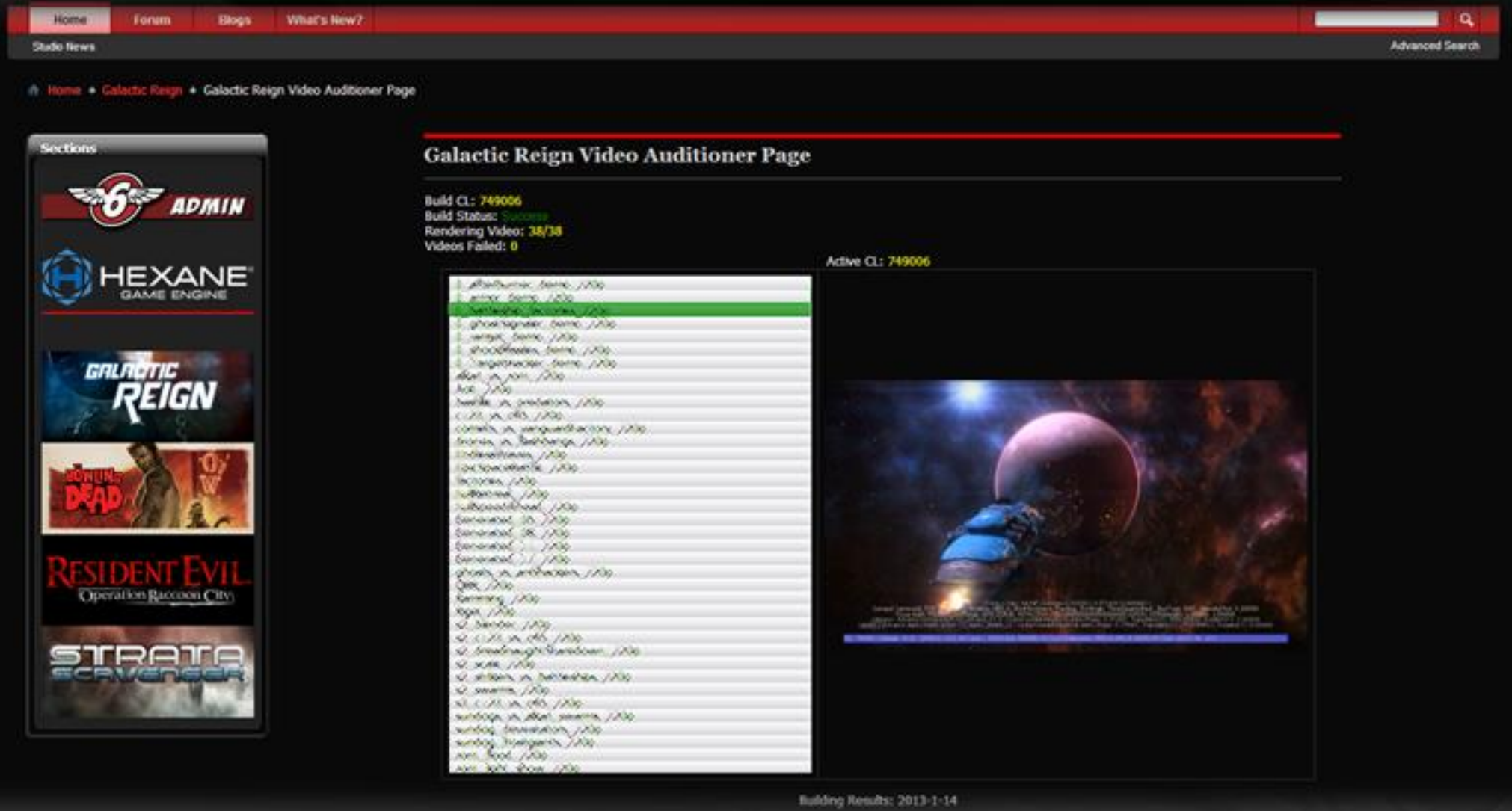
- Traditional Blame Thrower
- Physical Indication

JIMMY SKIDMORE
ATURE #1 IN
THE
OWLING

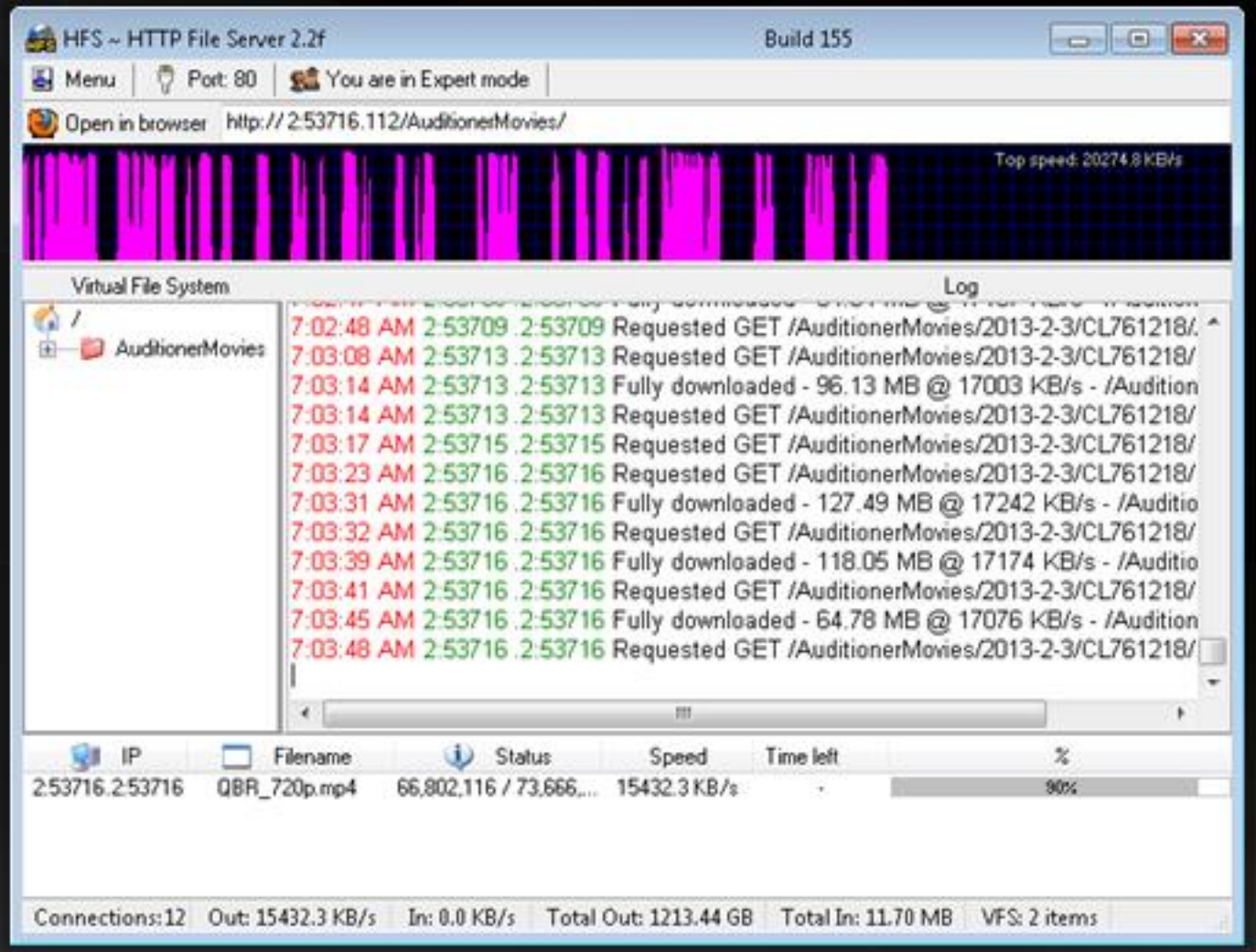
Automated Scripts \ Smoke Tests

- Battle Script Creation
- TTY, Debug Capture & Packaging

Auditioner Page



HFS – Http File Server



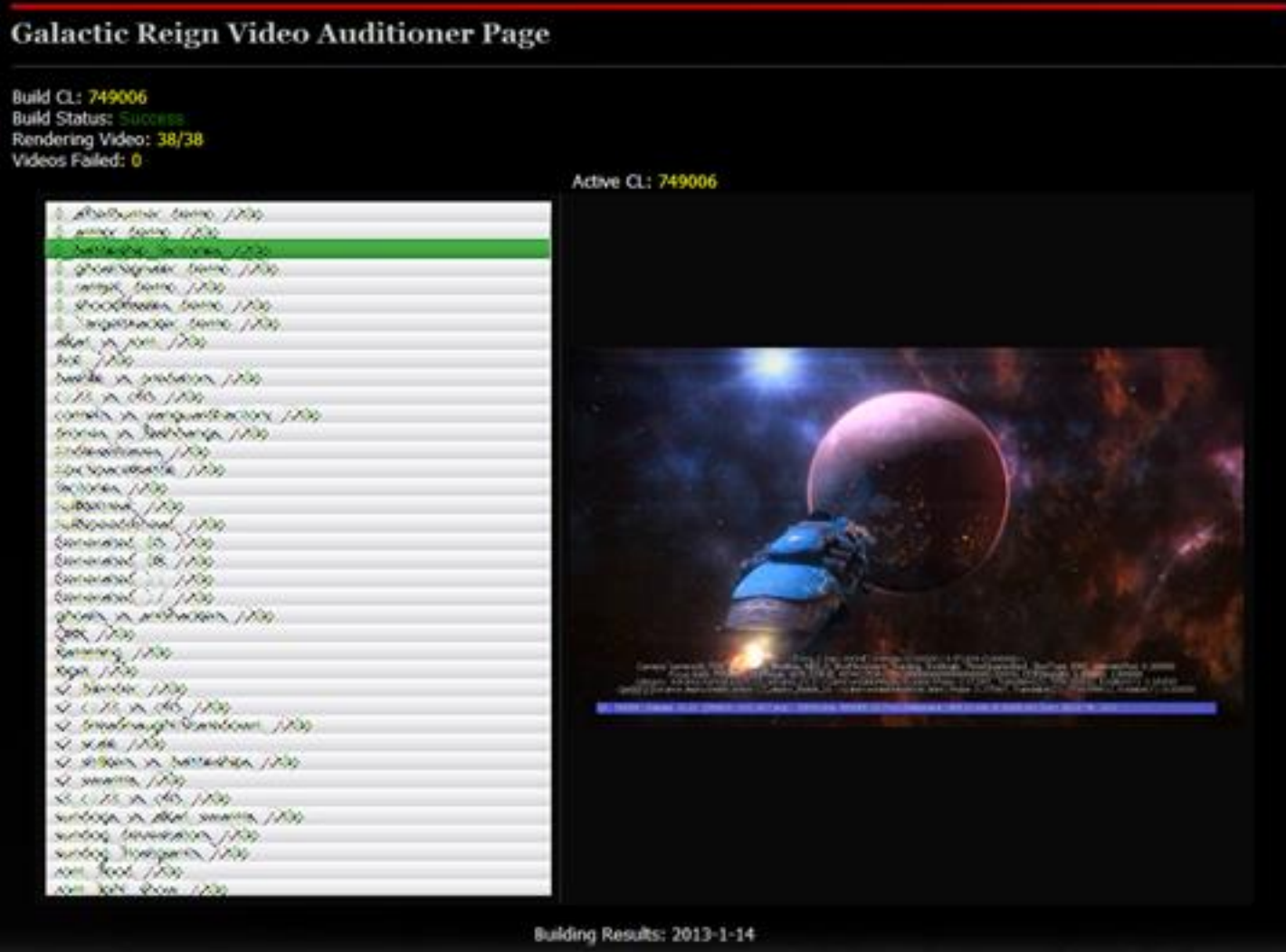
PHP / Python Backend

- Data Acquisition
- Build Iteration & Display

```
$output = '';
// Build Machine Server Root
    $serverRoot = "http://11210112 112/AuditionerMovies/";

// Load Video Information & History File
    $videoInfo = parse_ini_string(file_get_contents($serverRoot."TestInfo.ini"), True);

    if($videoInfo == false)
    {
        $output .= '<div style=" color: red; font-size: 200%;"><center>Unable to Find Server</center></
    }

    $historyInfofile = $videoInfo['HISTORY']['HISTORYINFO'];

    $historyInfo = parse_ini_string(file_get_contents($serverRoot.$historyInfofile), True);

// Collect Information
    $activeCL = $videoInfo['ACTIVE']['CL'];
    $activePlaylist = $historyInfo[$activeCL]['VIDEO'];

    $buildStatus = $videoInfo['BUILD']['STATUS'];
    $buildProgress = $videoInfo['BUILD']['PROGRESS'];
    $buildCL = $videoInfo['BUILD']['CL'];

    $failVideo = $serverRoot.$videoInfo['ERRORS']['FALLBACKVIDEO'];

    $historyDate = $videoInfo['HISTORY']['HISTORYDATE'];

    $failLogFile = $serverRoot.$historyDate."/CL".$buildCL."/Failed.log";


    $failLog = "";

// Data mine Fail Logs

    $failLogFileHandle = fopen($failLogFile, "r") or exit("Unable to open file!");
    //Read Lines and get the total line count
```

Video Cataloging / Player

- Build Playlist
- Review & Presentation

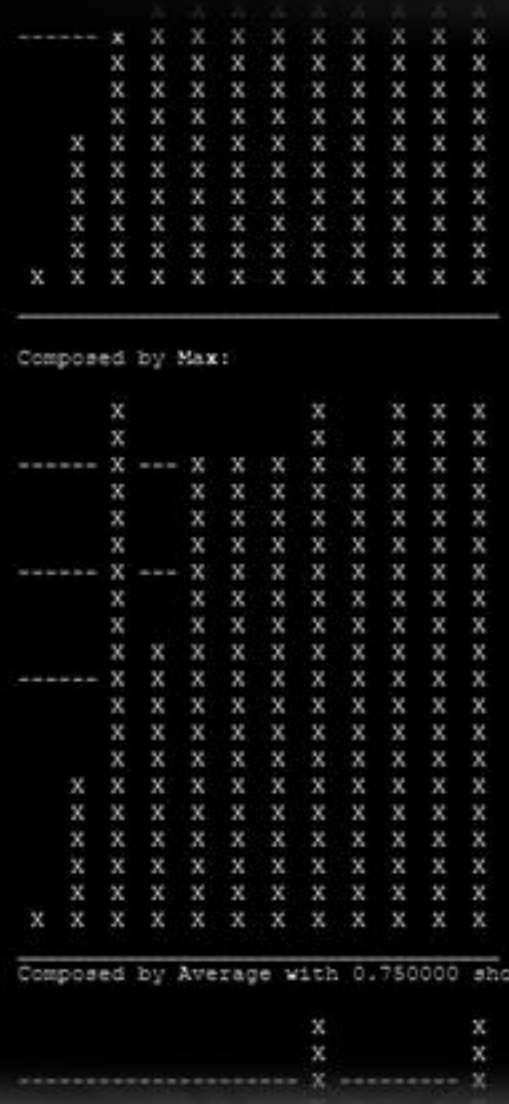


Logs and Failure Display

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Phase #	Phase Name	Shot#	Focus	Category 1	Category 2	Action 1	Playhouse Name 1	Action 2	Playhouse Name 2			
2	1	Intro	0	Attack	Advance	Advance	c3_deploy_afterburners_01.anim	C3_deploy_afterburners_01	establishingshots.anim	C4_deploy_shields_01			
3	2	InitiatingIncident	1	Attack	Wipe	Wipe	c4_wipe_close.anim	C4_wipe_close_01	c3_wipe_far_01.anim	C3_wipe_mid_01			
4	2	InitiatingIncident	2	Attack	Engage	Engage	c4_engage_mid_01.anim	C4_engage_mid_01	c3_defend_engage_close_01.anim	C3_defend_engage_close_01			
5	2	InitiatingIncident	3	Attack	Strike	React	c4_attack_close_01.anim	C4_attack_close_01 1	c3_defend_normal_close_01.anim	C3_defend_normal_close_01			
6	2	InitiatingIncident	4	Defend	Strike	React	c3_defend_normal_close_01.anim	C3_defend_normal_close_01	c4_attack_mid_01.anim	C4_attack_mid_01			
7	3	Transition1	5	Attack	Wipe	Wipe	c4_wipe_swarm_c2_01.anim	C4_wipe_swarm_C2_01					
8	3	Transition1	6	Attack	Engage	Engage	s3_c4_engage_swarm_c2_01.anim	S3_C4_engage_swarm_C2_01					
9	3	Transition1	7	Defend	Fire	Hit	c2_hit_swarm_s3_c4_01.anim	C2_hit_swarm_					
10	3	Transition1	8	Attack	Strike	React	s3_c4_attack_swarm_c2_01.anim	S3_C4_attack_sw					
11	3	Transition1	9	Defend	Strike	Outcome	c2_outcome_slaughtered_swarm_s3_c4_01.anim	C2_outcome_slaughtered					
12	4	Action1	10	Attack	Wipe	Wipe	c4_wipe_swarm_c1_01.anim	C4_wipe_swarm					
13	4	Action1	11	Attack	Engage	Engage	s3_c4_engage_swarm_c1_01.anim	S3_C4_engage_sw					
14	4	Action1	12	Attack	Strike	React	s3_c4_attack_swarm_c1_01.anim	S3_C4_attack_sw					
15	4	Action1	13	Defend	Strike	Outcome	c1_outcome_finalkill_swarm_s3_c4_01.anim	C1_outcome_finalKill_					
16	4	Action1	14	Defend	Damage	Damage	c1_damage_swarm_s3_c4_01.anim	C1_damage_swarm					
17	5	Outro	15	Attack	Exit	Exit	c4_outro_01.anim	C4_outro_					

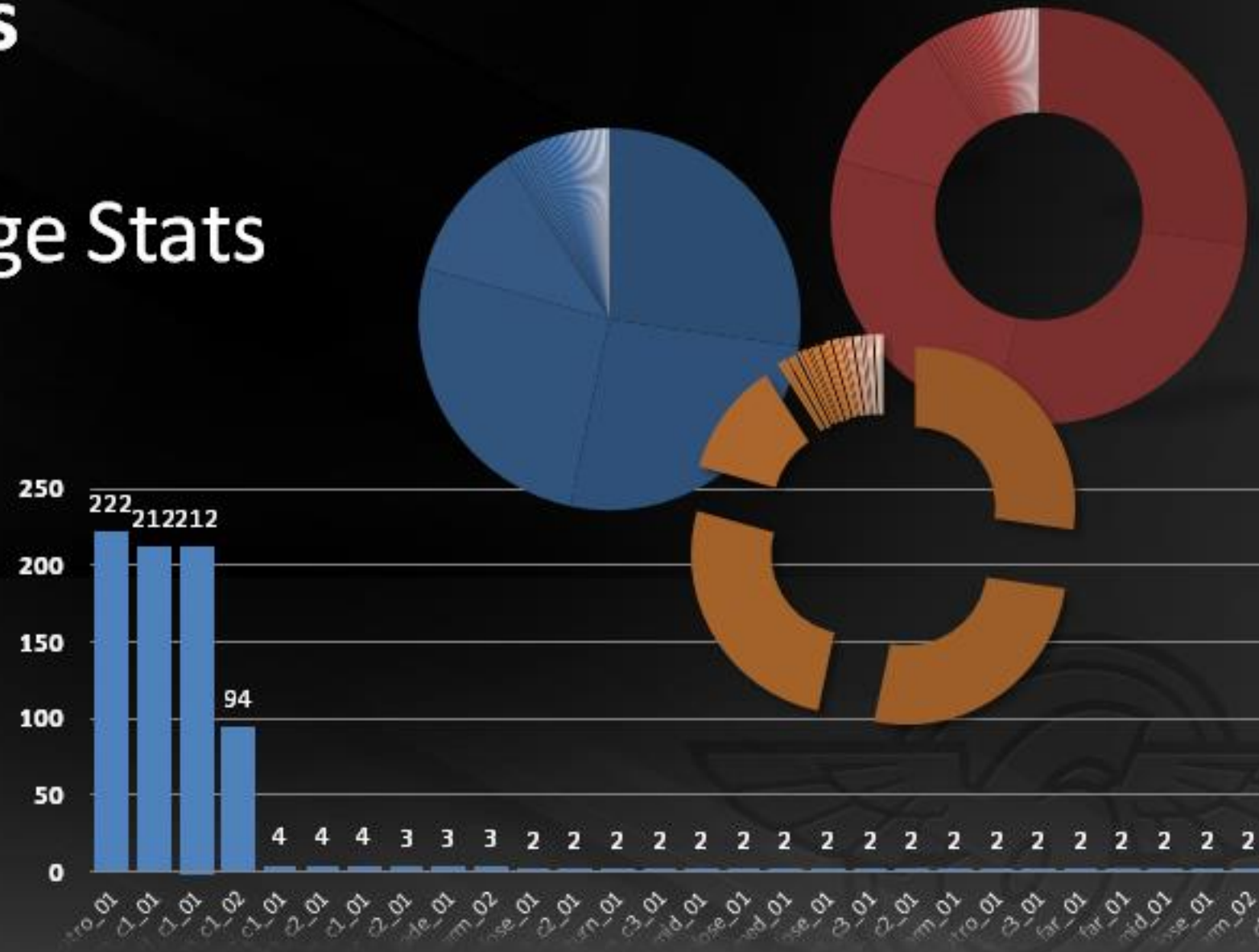
761218	88:58 Mins			
Script	TTY	MIG	SPL	Render
[redacted]	TTY	MIG	SPL	6:57
[redacted]	TTY	MIG	SPL	0:49
[redacted]	TTY	MIG	SPL	1:21
[redacted]	TTY	MIG	SPL	1:57
[redacted]	TTY	MIG	SPL	1:36
[redacted]	TTY	MIG	SPL	1:33
[redacted]	TTY	MIG	SPL	1:51
[redacted]	TTY	MIG	SPL	1:45
[redacted]	TTY	MIG	SPL	2:38
[redacted]	TTY	MIG	SPL	2:49
[redacted]	TTY	MIG	SPL	1:22
[redacted]	TTY	MIG	SPL	0:32
[redacted]	TTY	MIG	SPL	2:35
[redacted]	TTY	MIG	SPL	2:15

[redacted]	TTY	MIG	SPL	2:38
MovieName	TTY	MIG	SPL	2:49



Statistics Scripts

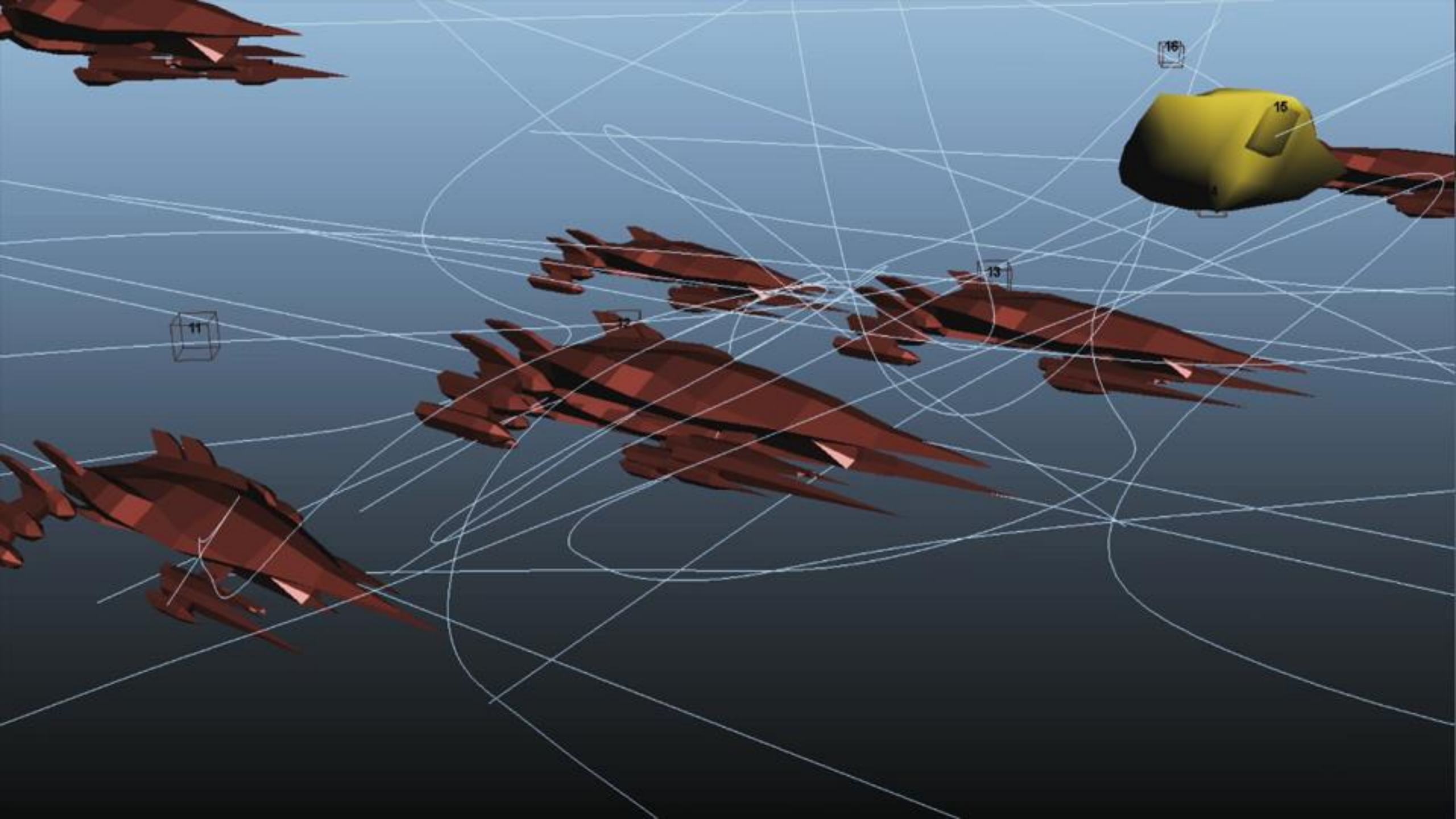
- Animation Usage Stats
- Sound FX Stats
- VFX Stats



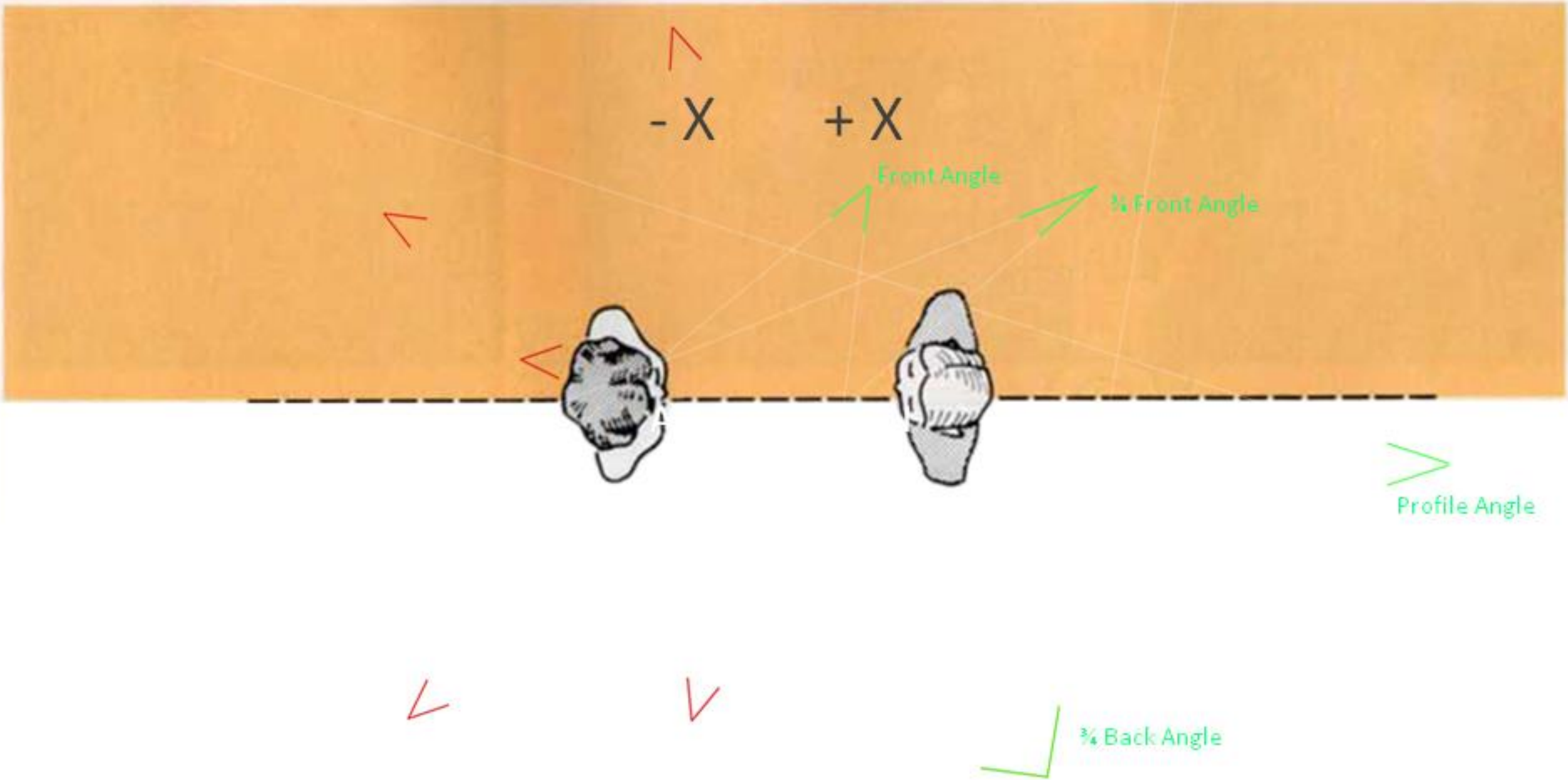
HOW THE GAME IS ANIMATED

How the Game is Animated

MAYA TOOLS


16
15
13
11

ANIMATIONS


-X
+X
Front Angle
¾ Front Angle
Profile Angle
¾ Back Angle

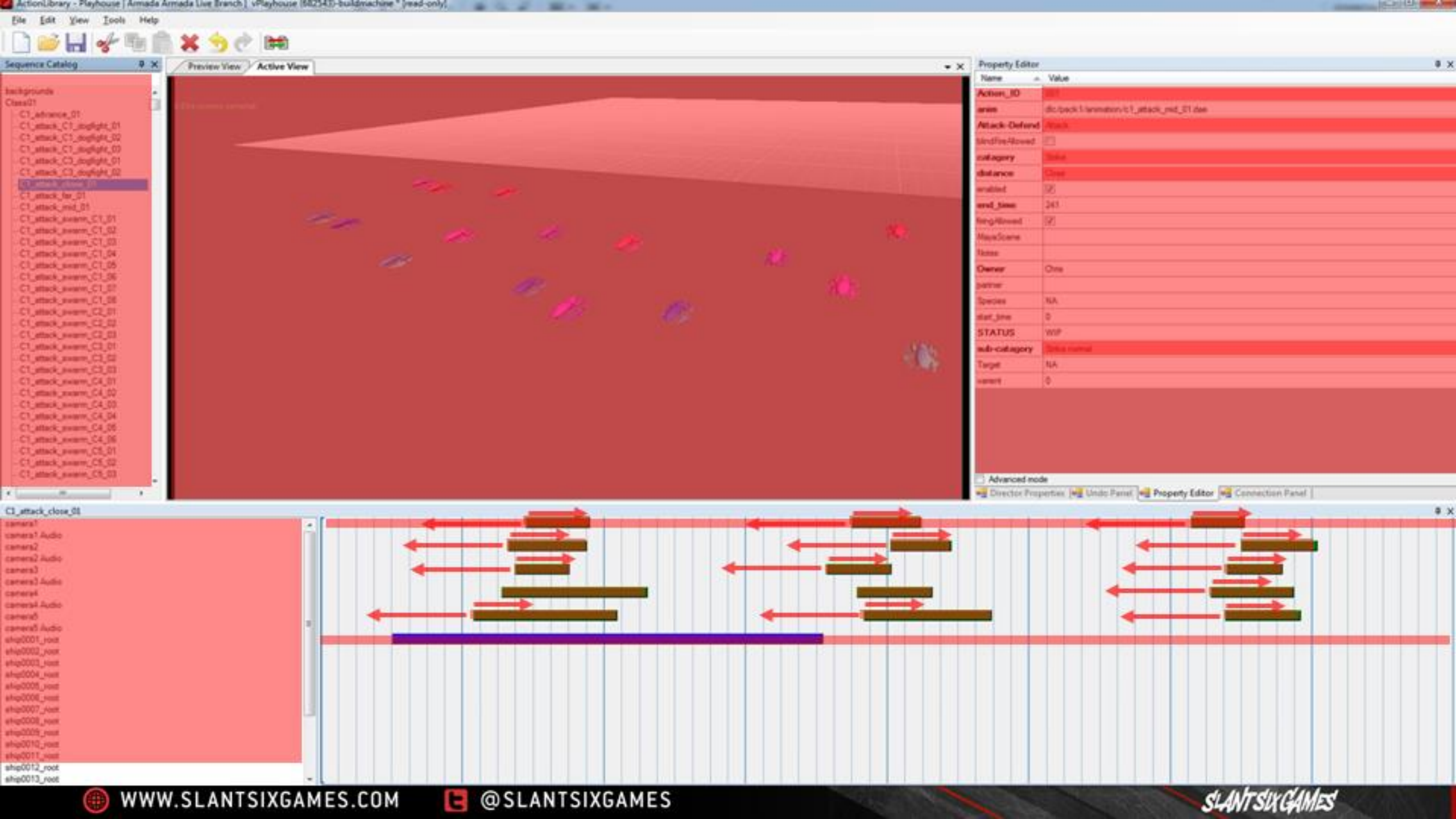
Animation Issues

- Animations needed to frame up ‘Ship 1’ at all times
- Hindered camera selection
- Better AI in camera system would have helped to determine population needed in fleet size and in frame.

How the Game is Animated

EDITING WITH PLAYHOUSE

Removing Data Stomping


ActionLibrary - Playhouse | Armada Armada Live Branch | vPlayhouse (682543)-buildmachine * [read-only]
File Edit View Tools Help
Sequence Catalog
Preview View
Active View
Property Editor
Name
Value
Advanced mode
Director Properties
Undo Panel
Property Editor
Connection Panel
C1_attack_close_01
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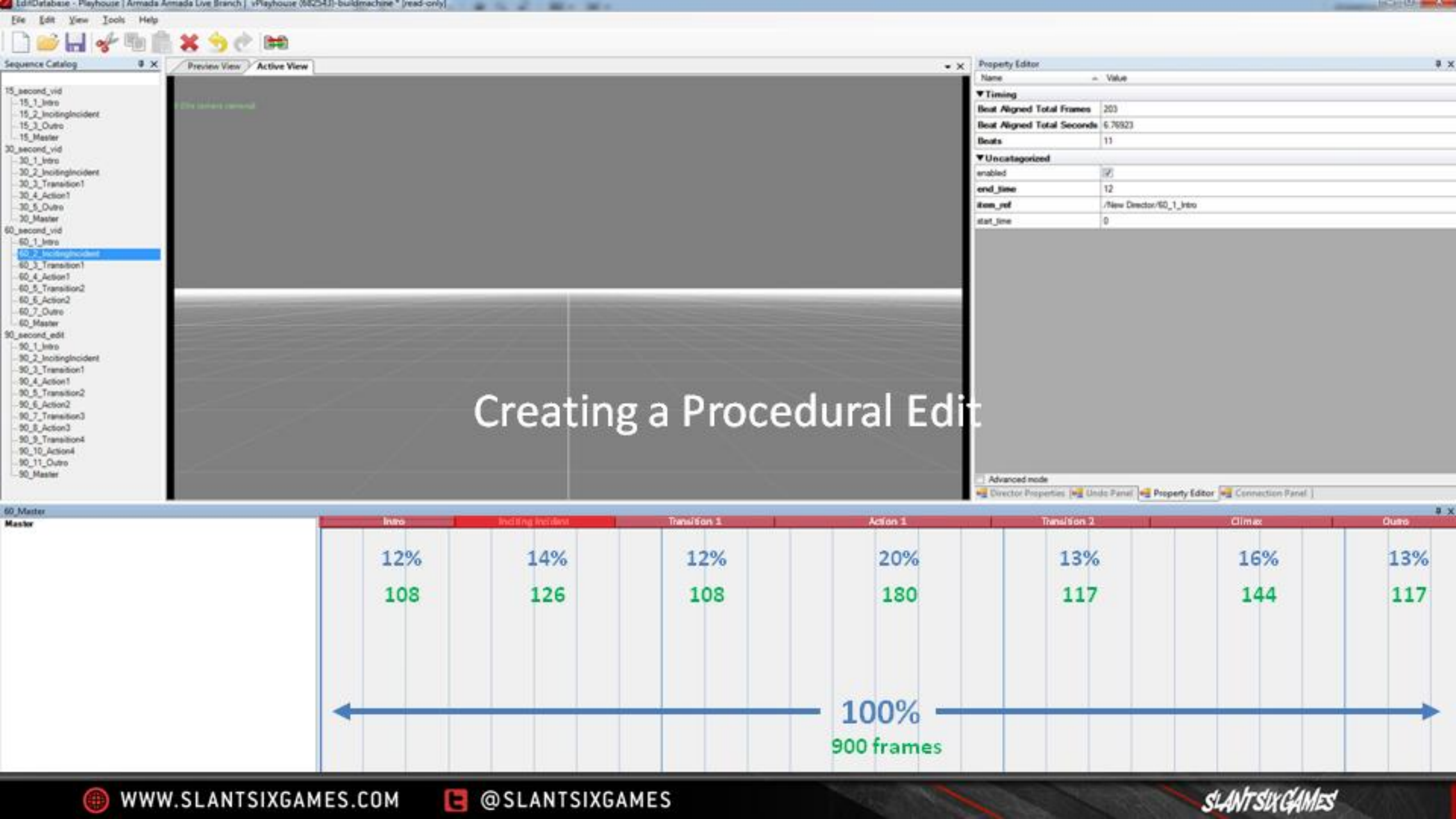
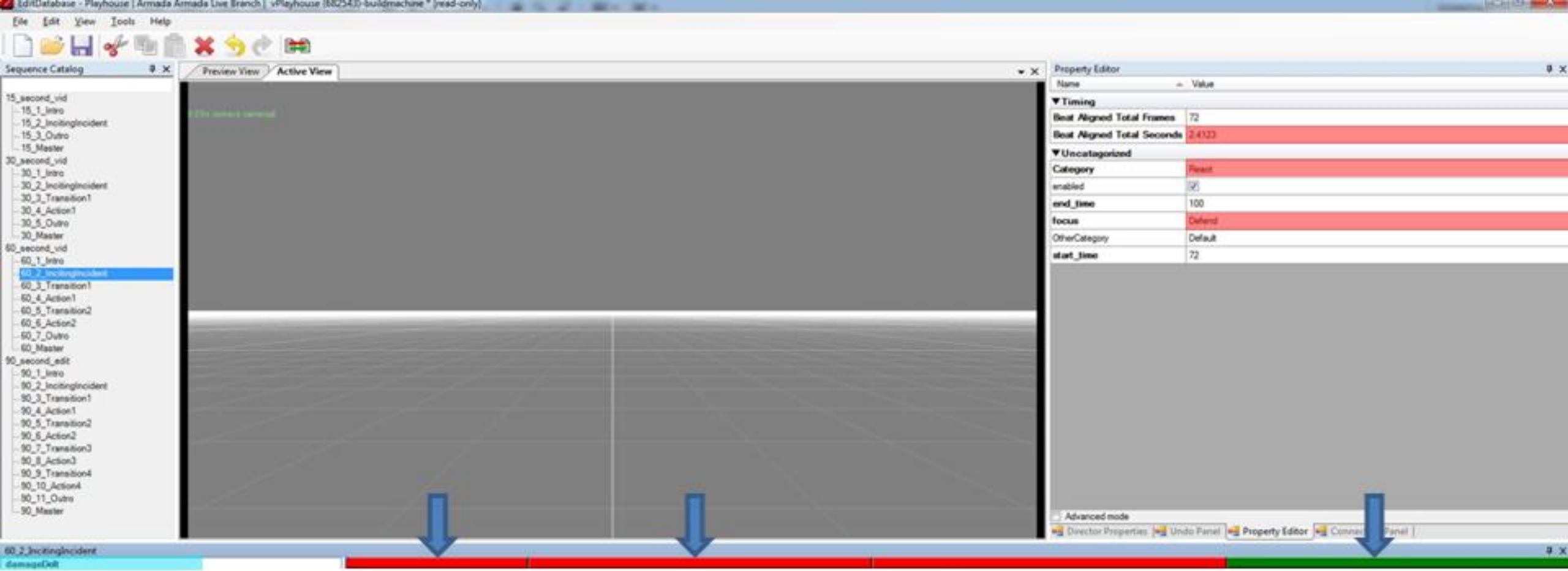
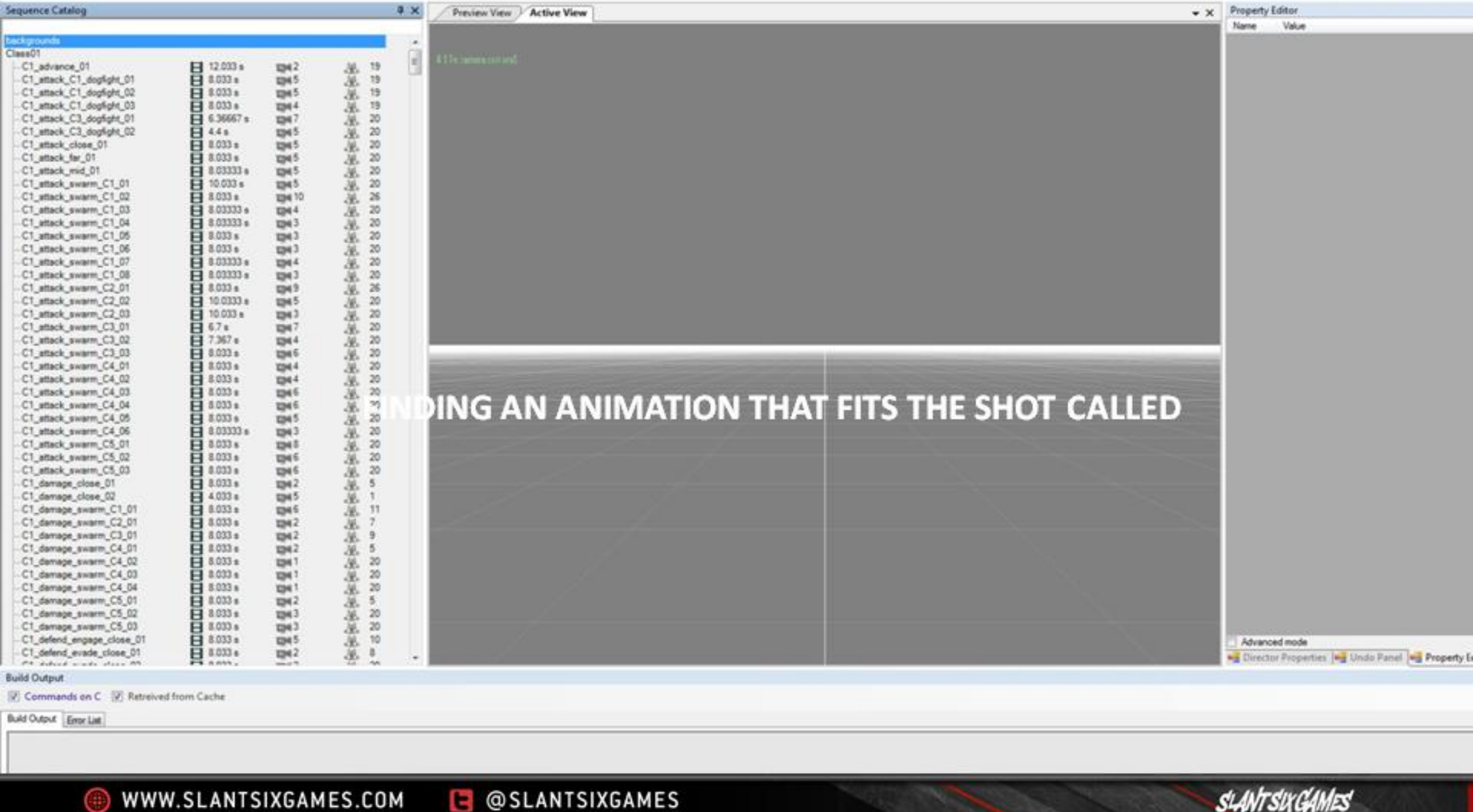

Creating a Procedural Edit
Intro
Inciting Incident
Transition 1
Action 1
Transition 2
Climax
Outro
12%
14%
12%
20%
13%
16%
13%
108
126
108
180
117
144
117
100%
900 frames


[EditDatabase - Playhouse | Armada Armada Live Branch | vPlayhouse (682543)-buildmachine * (read-only)]
File Edit View Tools Help
Sequence Catalog
15_second_vid
15_1_Intro
15_2_IncitingIncident
15_3_Outro
15_Master
30_second_vid
30_1_Intro
30_2_IncitingIncident
30_3_Transition1
30_4_Action1
30_5_Outro
30_Master
60_second_vid
60_1_Intro
60_2_IncitingIncident
60_3_Transition1
60_4_Action1
60_5_Transition2
60_6_Action2
60_7_Outro
60_Master
90_second_edit
90_1_Intro
90_2_IncitingIncident
90_3_Transition1
90_4_Action1
90_5_Transition2
90_6_Action2
90_7_Transition3
90_8_Action3
90_9_Transition4
90_10_Action4
90_11_Outro
90_Master
Preview View
Active View
Property Editor
Name
Value
Timing
Beat Aligned Total Frames
72
Beat Aligned Total Seconds
2.4123
Uncatagorized
Category
Reset
enabled
end_time
100
focus
Defend
OtherCategory
Default
start_time
72
Advanced mode
Director Properties
Undo Panel
Property Editor
60_2_IncitingIncident
damageDelt

Casting System Issues

- System was only designed initially to handle 1 fleet vs. another at any time.
- Issues started to arise when there were multiple fleets attacking one another in the game
- Continuity was an ongoing issue with background ships in placement and in action.


Sequence Catalog
backgrounds
Class01
C1_advance_01 12.033 s 2 19
C1_attack_C1_dogfight_01 8.033 s 5 19
C1_attack_C1_dogfight_02 8.033 s 5 19
C1_attack_C1_dogfight_03 8.033 s 4 19
C1_attack_C3_dogfight_01 6.36667 s 7 20
C1_attack_C3_dogfight_02 4.4 s 5 20
C1_attack_close_01 8.033 s 5 20
C1_attack_far_01 8.033 s 5 20
C1_attack_mid_01 8.03333 s 5 20
C1_attack_swarm_C1_01 10.033 s 5 20
C1_attack_swarm_C1_02 8.033 s 10 26
C1_attack_swarm_C1_03 8.03333 s 4 20
C1_attack_swarm_C1_04 8.03333 s 3 20
C1_attack_swarm_C1_05 8.033 s 3 20
C1_attack_swarm_C1_06 8.033 s 3 20
C1_attack_swarm_C1_07 8.03333 s 4 20
C1_attack_swarm_C1_08 8.03333 s 3 20
C1_attack_swarm_C2_01 8.033 s 9 26
C1_attack_swarm_C2_02 10.0333 s 5 20
C1_attack_swarm_C2_03 10.033 s 3 20
C1_attack_swarm_C3_01 6.7 s 7 20
C1_attack_swarm_C3_02 7.367 s 4 20
C1_attack_swarm_C3_03 8.033 s 6 20
C1_attack_swarm_C4_01 8.033 s 4 20
C1_attack_swarm_C4_02 8.033 s 4 20
C1_attack_swarm_C4_03 8.033 s 6 20
C1_attack_swarm_C4_04 8.033 s 6 20
C1_attack_swarm_C4_05 8.033 s 5 20
C1_attack_swarm_C4_06 8.03333 s 3 20
C1_attack_swarm_C5_01 8.033 s 8 20
C1_attack_swarm_C5_02 8.033 s 6 20
C1_attack_swarm_C5_03 8.033 s 6 20
C1_damage_close_01 8.033 s 2 5
C1_damage_close_02 4.033 s 5 1
C1_damage_swarm_C1_01 8.033 s 6 11
C1_damage_swarm_C2_01 8.033 s 2 7
C1_damage_swarm_C3_01 8.033 s 2 9
C1_damage_swarm_C4_01 8.033 s 2 5
C1_damage_swarm_C4_02 8.033 s 1 20
C1_damage_swarm_C4_03 8.033 s 1 20
C1_damage_swarm_C4_04 8.033 s 1 20
C1_damage_swarm_C5_01 8.033 s 2 5
C1_damage_swarm_C5_02 8.033 s 3 20
C1_damage_swarm_C5_03 8.033 s 3 20
C1_defend_engage_close_01 8.033 s 5 10
C1_defend_evade_close_01 8.033 s 2 8
Preview View
Active View
NDING AN ANIMATION THAT FITS THE SHOT CALLED
Property Editor
Name
Value
Advanced mode
Director Properties
Undo Panel
Property E
Build Output
Commands on C
Retreived from Cache
Build Output
Error List

James Ricker
@JamesRickers

Robert Butterworth
@TechArtButters