

**WASP3D**  
Soccer Application



## Soccer Application

The Soccer Application has been made for the WASP3D Community. It is programmed using the Wasp3D Shot box SDK.

The intent of creating this application is to demonstrate how users can create custom applications & control the graphics On-Air which are played out on WASP3D Sting Server or WASP3D Frame Sting Server.

The application demonstrates two major aspects

1. How to populate the UDT from an external application?
2. How to control the templates through the SDK (Load, unload, Play, Pause etc.?)

It serves as a host for the Soccer scorecard. This application displays & updates the scoreboard as well as other graphics which are on-air. It also updates the data to the Data base, which is further linked to the various data fields in different graphics. Therefore, it updates the scoreboard data automatically. So no extra effort or manpower is required to update the general database - it just works.

**Below are the details of the application and how it is supposed to work.**

The screenshot displays the Soccer Application interface. At the top, it shows the match title "Arsenal Vs Liverpool". Below this, the score is displayed as Arsenal 3 - 17 Liverpool, with a timer at 44:54. The interface includes a "MATCH 1" dropdown set to "First Half" and buttons for "Foul", "Yellow", "Red", "Corner", "Shots ON", "Shots OFF", "Substitute", "button1", and "Load BG".

A "Match Events" table is visible, listing events such as "Corner kicks", "Shots On Goal", "Shots Off Goal", and "Goal" for both teams. The table includes columns for S.No, Time, Match Part, Event Memo, Team Name, and Player Name.

Below the events table, there are two main sections: "MATCH SUMMARY" and "FIELD FORMATION". Both sections have a "Name" field set to "Soccer Match" and a "Field Formations" dropdown. The "MATCH SUMMARY" section also includes a "Skip" button and a "Scene Cued" status. The "FIELD FORMATION" section includes a "Skip" button and a "Scene Cued" status.

At the bottom, there are buttons for "Post", "Update", and "Preview" for both sections. The interface also features a "Select Graphic" panel on the left with various options like "Field Formation", "Match Lowerthird", "Match Schedule", etc.



This application would be used to trigger graphics during the match as well as manage the score and other match information for the selected match.

The match schedule would be updated in a UDT which is be a receiver as well as source for the updated data to and from the application respectively.

The Select Match button would list the matches as per the schedule entered in the UDT and the Select Part button would select the 1st half, second half or extra time.

The **Home team** and **Away team** would automatically get selected depending upon the match selected and would also get updated in the Score Bug graphic as well as all the respective graphics.

The updates to score and timer start stop are directly linked to the Score Bug, so any updates to in the application would update the score and timer.

When the User selects any particular event like **Foul, Yellow, Red** etc. he would be prompted to select the team and player who made the foul, or received yellow/red card. Match events would display a log of match events.

The selected event would trigger the event based graphic on-air.

The Select Graphic column displays a list of graphics which are played during match presentation, after 1st half or at the end of match. These graphics can be selected to load in a particular player P1 or P2 based on which one is empty or selectively by using the radio button.

The Data for all the match presentation graphics would be sourced from the UDT.

Some graphic data selections would be made on the template's Player form also. For e.g. - Team Line Up or Team Roaster, the combo box to select the team (home or away) would be available in the player form.

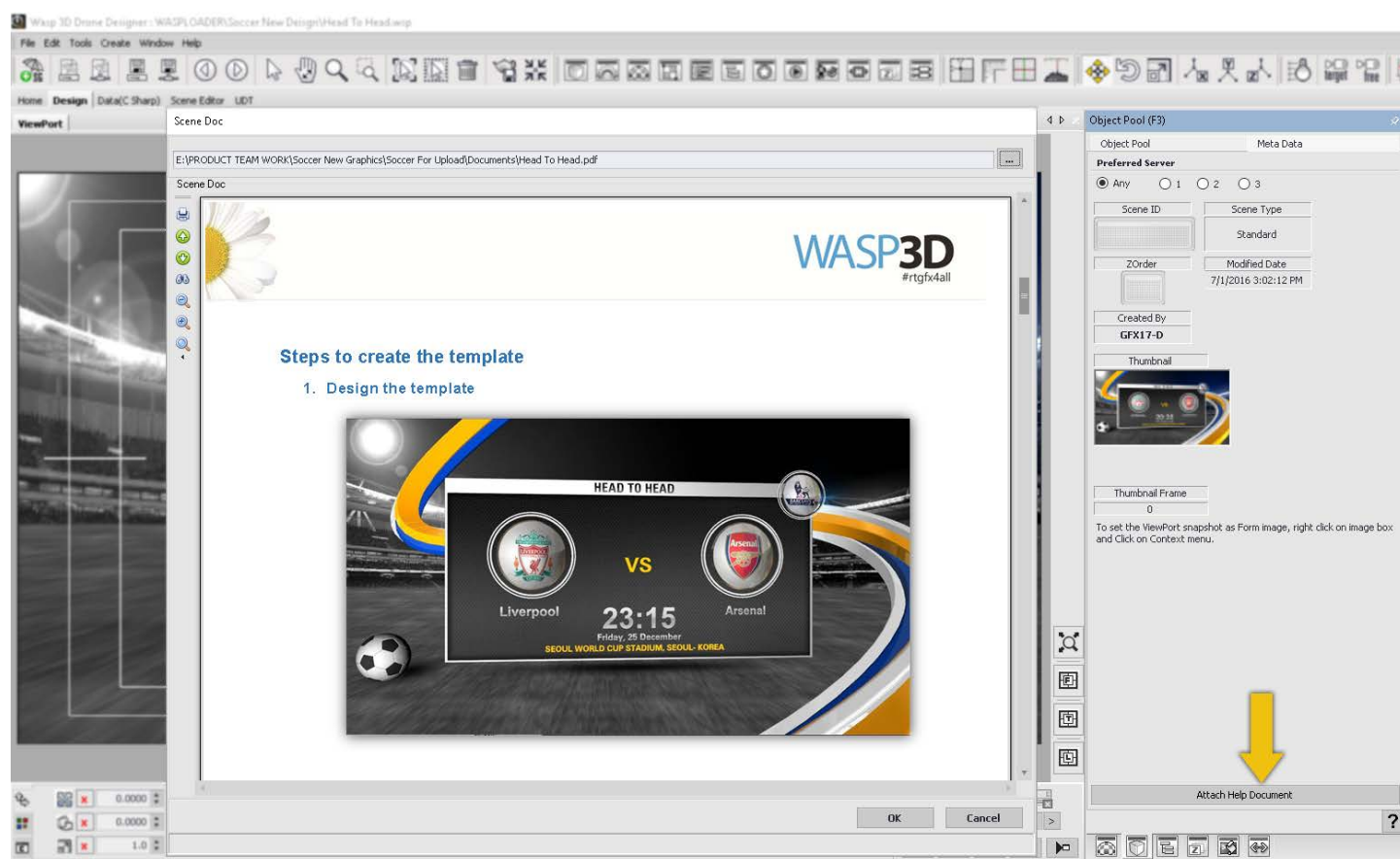
All the templates, have an evict functionality. **Evict functionality**, plays out the graphics on air when we Cue(F9) the second graphic. Once the graphic on air animates out, it raises another trigger for the cued graphics to play itself.

The score bug will come by default on the server. All the actions for the score bug like **start timer, extra time** will be triggered through the application in real-time.

There is a "**Load BG**" button, which loads & unloads the background stadium template from the Server.

There are three UDT- **Soccer Match Schedule, Soccer Match & the League Table**. The structure and functionality of these is defined in the document from Page 5 to Page 8.

Each template contains the help document for creating the template. To access the help document. Navigate to Object Pool(F3)>Meta Data Tab> & click the "Attach Help Document" button located at bottom of the Object Pool window. The same is shown in the image below.



The "Soccer Version 3.8.1" contains all the files & folders.

Name	Date modified	Type	Size
Resources	11/4/2016 6:01 PM	File folder	
SoccerApp.exe	11/4/2016 6:00 PM	Application	193 KB
SoccerApp.vshost.exe	11/4/2016 5:21 PM	Application	23 KB
Beesys.Wasp.AddIn.LinkCommandMana...	10/7/2016 7:12 PM	Application extens...	21 KB
BeeSys.Wasp.CommonReference.dll	10/7/2016 7:12 PM	Application extens...	88 KB

Resources folder has all the w3d files- "Soccer Scenes" & the UDTs. Unarc the scenes for all the assets.

User must have an X drive on the machine, as all the texture, shapes & 3d models are coming from X drive.

Make sure Microsoft SQL Server 2012 or above is installed on the machine.

Templates.xml file located in the folder contains the individual template path from which they will be loaded in the application. Make sure your located as per the location specified in the XML. The path can also be changed as per requirement.



```
templates.xml - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="utf-8" ?>
<templates>
  <template name="Field Formation.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Field Formation.w3d" description="Field Formation" ismanual="true"/>
  <template name="Match Lowerthird.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Match Lowerthird.w3d" description="Match Lowerthird" ismanual="true"/>
  <template name="Match Schedule.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Match Schedule.w3d" description="Match Schedule" ismanual="true"/>
  <template name="Team Line Up.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Team Line Up.w3d" description="Team Line UP" ismanual="true"/>
  <template name="Head To Head.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Head To Head.w3d" description="Head To Head" ismanual="true"/>
  <template name="Match Score LT.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Match Score LT.w3d" description="Match Score LT" ismanual="true"/>
  <template name="Official Band LT.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Official Band LT.w3d" description="Official Band LT" ismanual="true"/>
  <template name="Referee Band.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Referee Band.w3d" description="Referee Band" ismanual="true"/>
  <template name="Match FT Summary Statistics.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Match FT Summary Statistics.w3d" description="Match FT Summary Statistics" ismanual="true"/>
  <template name="Team Line Up Players.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Team Line Up Players.w3d" description="Team Line UP Players" ismanual="true"/>
  <template name="Player Profile.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Player Profile.w3d" description="Player Profile" ismanual="true"/>
  <template name="Team Roster.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Team Roster.w3d" description="Team Roster" ismanual="true"/>
  <template name="League Table.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\League Table.w3d" description="League Table" ismanual="true"/>
  <template name="Background.wsp" id="E:\GitSolutions\Version3.8.1-Github\SoccerApp\Resources\SoccerScenes\Background.w3d" description="bg" ismanual="false"/>
  <!-- <template name="TestScene.wsp" id="4bc95beb-3c9c-4295-9af9-fe670e4fc9b" description="matchevent" ismanual="false"/> -->
</templates>
```


## Sting Server

```
SoccerApp.exe.config - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <startup>
    <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.5.1"/>
  </startup>
  <appSettings>
    <add key="versionkey" value="LOCALMANAGERURL"/>
    <add key="stingserverip" value="192.168.1.172"/>
    <add key="stingserverport" value="50011"/>
    <add key="udtname" value="Soccer Match Schedule"/>
    <add key="counterusertag" value="CountDown"/>
    <add key="counterstartaction" value="Start_CountDown"/>
    <add key="counterstopaction" value="Pause_CountDown"/>
    <add key="extratimein" value="ExtraTime_IN"/>
    <add key="extratimeout" value="ExtraTime_OUT"/>
    <add key="startextratime" value="Start_ExtraTime"/>
    <add key="stopextratime" value="Pause_ExtraTime"/>
    <add key="extratimeusertag" value="CountDown_ET"/>
    <add key="scorebugid" value="82142E6B-3671-4C3A-ACF0-761D72171110"/>
  </appSettings>
</configuration>
```

Go to Soccer Application folder- SoccerApp.exe.config & put the IP of the machine on which sting server is running.

Switch on Sting Server to see the Final Output.

Once all the settings are done, play the exe. File to run the application.

 SoccerApp.exe	11/4/2016 6:00 PM	Application	193 KB
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Please install the Skeletal Animation addin is installed & configured on the machine for the field formation template.

**Please follow the link below on how to use the Skeletal Animation:**

<https://s3.amazonaws.com/forum.wasp/DOCS/UserGuides/ImportSkeletalMesh.pdf>





## Soccer Match Schedule

The Match Schedule UDT, contains all the data related to the match time, location, teams playing & the UDT names which has all the data related to that teams & players playing the match. When user selects the match from the application, the respective row of the match details gets checked on.



Match	Name	Location	Time	Date	Home Team	Away Team	Home Team Logo	Away Team Logo	UDT Name	Active
<input checked="" type="checkbox"/>	MATCH 1	EMIRATES STADIUM	16:00	Friday, December 2	ARSENAL	LIVERPOOL	X:\Wasp3d\Textures\Soccer\Graphics\Logos_Team\Arsenal.png	X:\Wasp3d\Textures\Soccer\Graphics\Logos_Team\Liverpool.png	Soccer Match	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	MATCH 2	STAMFORD STADIUM CA	15:00	Saturday, December	STOKE CITY	ARSENAL	X:\Wasp3d\Textures\Soccer\Graphics\Logos_Team\Stoke City.png	X:\Wasp3d\Textures\Soccer\Graphics\Logos_Team\Arsenal.png	Soccer Match_2	<input type="checkbox"/>
<input checked="" type="checkbox"/>	MATCH 3	EMIRATES STADIUM	18:35	Sunday, December	WIGAN	EVERTON	X:\Wasp3d\Textures\Soccer\Graphics\Logos_Team\Wigan.png	X:\Wasp3d\Textures\Soccer\Graphics\Logos_Team\Everton.png	Soccer Match_3	<input type="checkbox"/>





### Soccer Match

It contains all the data related to the Teams, Match Statistics, Match Events. When user updates the data in the application, the same is updated/added to the UDT. This data is linked to the various graphics, through simple drag & drop functionality, therefore it updates the data in the graphics while they are on air.

The current UDT, has three tables – Team, Match Statistics, Match Events

The Team table contains teams & players' information.





Design Data Entry

Font Size 8 Clear All Print Reset

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Match Field Position

ID	Active	Name	Location	Date	Time	Home Team	Away Team	Short Name_AT	Short Name_HT	Ho...	Aw...	Round	Home Team Logo
0	<input checked="" type="checkbox"/>	Match 1	SEOUL WORLD CUP STADIUM, SEOUL-	Friday, 25 Decembr	23:15	LIVERPOOL	ARSENAL	ARSENAL	LIVERPOOL	3	2	1	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Liverpool.png

**TEAM INFORMATION**

Teams Match Statistics Match Events

Name	Country	Logo	Short Name
ARSENAL	England	X:\Wasp3d\Textures\Soccer Graphics\L_ARS	

**PLAYER INFORMATION**

Players

Pla...	Jer...	First Name	Second Name	Age	DOB	Height	Weight	Position	Image	Field Position
<input checked="" type="checkbox"/>	1	Aaron	Ramsey	24	12/14/1991	6'1	73	Centre Forward	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Aaro...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	2	Aboudiaby		19	03/12/1996	5'10	81	Sweeper	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Abo...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	3	Alex	Song	22	04/10/1993	5'8	86	Central Midfielder	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Alex...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	4	Amaury	Bischoff	26	11/26/1989	5'11	80	Winger	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Ama...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	5	Carlos	Vela	20	04/17/1995	6'0	76	Wing Back	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Carlo...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	6	Cesc	Fabregas	21	09/11/1994	5'1	75	Right FullBack	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Cesc...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	7	Denilson		29	09/05/1986	6'0	78	Right Midfielder	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Denil...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	8	Eduardo		23	11/01/1992	5'11	68	Left FullBack	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Edua...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	9	Emmanuel	Eboue	28	11/02/1987	5'9	71	Centre FullBack	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Emm...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	10	Gael	Clichy	21	05/16/1994	5'10	70	Second Striker	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Gael...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	11	Jack Wil	Shere	19	08/24/1996	5'11	65	Striker	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Jack...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	12	Kolo	Toure	23	07/06/1992	5'10	67	Centre Forward	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Kolo...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	13	Lukas	Fabianski	26	02/23/1989	6'2	90	Goalkeeper	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Luka...	0.000000,0.000000,0.000000
<input checked="" type="checkbox"/>	14	Tomas	Rosicky	26	03/28/1989	6'1	76	Offensive Midfiel...	X:\Wasp3d\Textures\Soccer Graphics\football_Players\Arsenal\Tom...	0.000000,0.000000,0.000000







Match Statistics table contains all the score stats, goals scored by time segment.

Wasp 3D Drone Designer : WASPLOADER\Resolution\Resolution Case.wsp

File Edit Window

Home Design Data(C Sharp) Scene Editor UDT

Design Data Entry

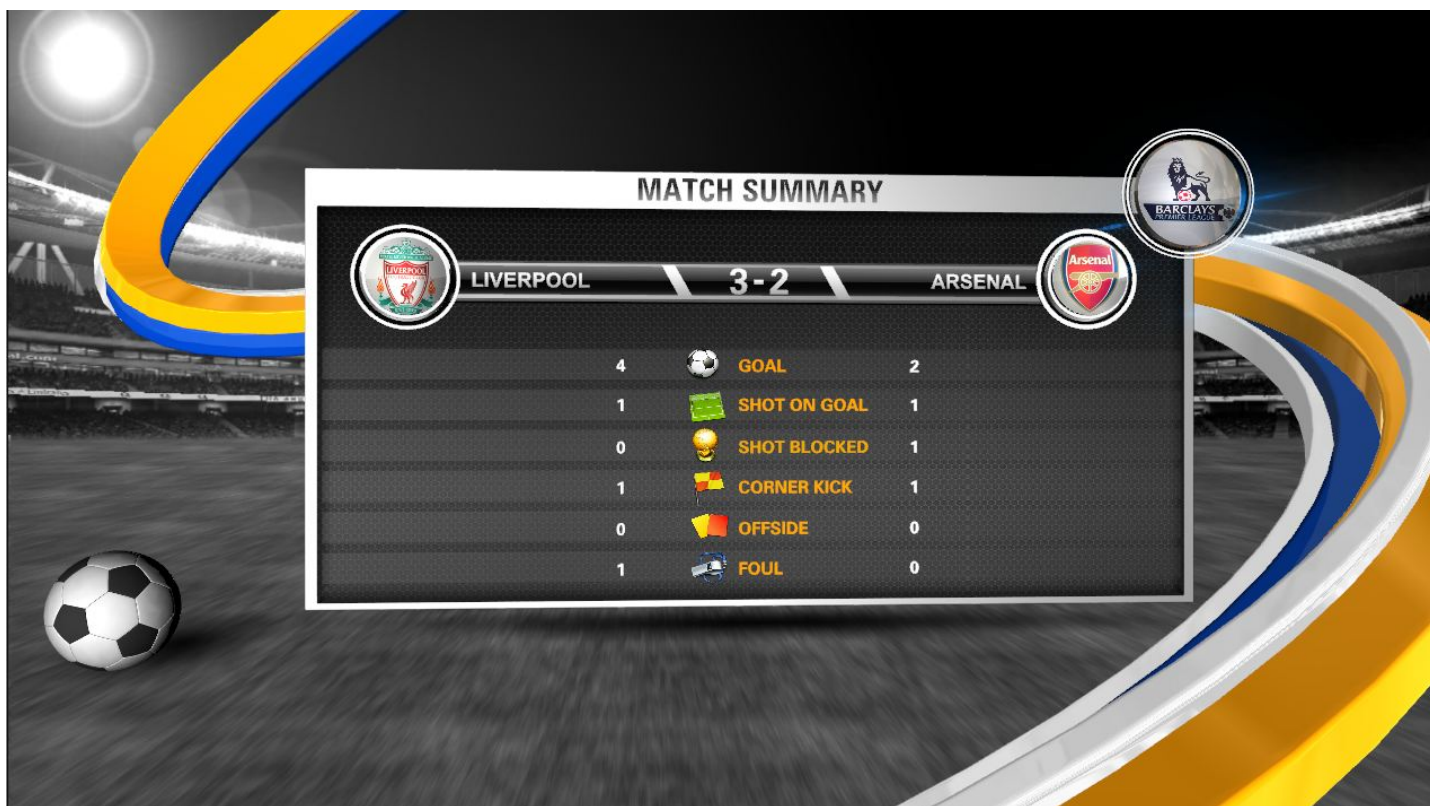
Font Size 8 Clear All Print Reset

-1.000000,0.000000 0

Match	Field Position	ID	Active	Name	Location	Date	Time	Home Team	Away Team	Short Name_AT	Short Name_HT	Ho...	Aw...	Round	Home Team Logo
0	Match 1				SEOUL WORLD CUP STADIUM, SEOUL	Friday, 25 Decembr	23:15	LIVERPOOL	ARSENAL	ARSENAL	LIVERPOOL	3	2	1	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Liver

**MATCH STATISTICS**

Teams	Match	Home Goal	Home Shots Missed	Home Shots On Goal	Home Corner	Home Offside	Home Foul	Away Goal	Away Shots Missed	Away Shots On Goal	Away Corner	Away Offside	Away Foul	Home Possession	Away Possession
0	Match 1	4	0	1	1	0	1	2	1	1	1	0	0		



The Match events table contains all the events; user selects the event from the application. Any new event selected on the application will create a new entry in the UDT.

Home Design Data(C Sharp) Scene Editor **UDT**

Design Data Entry

Font Size 8 Clear All Print Reset

☒ -1.000000,0.000000 0

Match Field Position

ID	Active	Name	Location	Date	Time	Home Team	Away Team	Short Name_AT	S
0	<input checked="" type="checkbox"/>	Match 1	SEOUL WORLD CUP STADIUM, SEOUL-	Friday, 25 Decembe	23:15	LIVERPOOL	ARSENAL	ARSENAL	L

Teams Match Statistics Match Events **MATCH EVENTS**

Time	Match Part	Ev...	Event Type	Player	Team	new
		0		Aaron	ARSENAL	Aaron
00:05	First Half	3	Goal	Aaron	ARSENAL	Aaron
00:16	First Half	4	Goal	Damien Plessis	LIVERPOOL	Aaron
00:20	First Half	4	Fouls	Alex	ARSENAL	Aaron
00:44	First Half	5	Yellow Cards	Alberto	LIVERPOOL	Aaron



## League Table

This is an independent UDT, has no link with other UDT's.

Home Design Data(C Sharp) Scene Editor UDT											
Design Data Entry											
Font Size 8 Clear All Print Reset											
[-1.000000,0.000000] 0											
Point Table											
Vi...	Rank	Team Name	Team Logo	Played	Win	Draw	Loses	Goals For	Goals Against	Points	Goal Difference
<input checked="" type="checkbox"/>	0	Athletic Bilbao	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Athleti...	38	16	3	19	0	0	0	0
<input checked="" type="checkbox"/>	0	Atletico Madrid	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Atletic...	38	17	1	20	0	0	0	
<input checked="" type="checkbox"/>	0	Fc Barcelona	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Fc_ba...	38	34	0	4	0	0	0	0
<input checked="" type="checkbox"/>	0	Celta De Vigo	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Celta-...	38	14	2	22	0	0	0	0
<input checked="" type="checkbox"/>	0	RC Deportivo	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\RC_D...	38	12	1	25	0	0	0	0
<input checked="" type="checkbox"/>	0	Chelsea	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Chels...	38	15	7	16	0	0	0	0
<input checked="" type="checkbox"/>	0	S D Eibar	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\SD_Ei...	38	12	6	20	0	0	0	0
<input checked="" type="checkbox"/>	0	Manchester City	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Manc...	38	16	4	18	0	0	0	0
<input checked="" type="checkbox"/>	0	Real Madrid	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Real-...	38	16	4	18	0	0	0	0
<input checked="" type="checkbox"/>	0	Fulham	X:\Wasp3d\Textures\Soccer Graphics\Logos_Team\Fulha...	38	19	1	18	0	0	0	0
<input type="checkbox"/>											



LEAGUE TABLE

TEAM		Athletic Bilbao	GP	W	D	L	GF	GA	PT
			38	16	3	19	0	0	0
TEAM		Atletico Madrid	GP	W	D	L	GF	GA	PT
			38	17	1	20	0	0	0
TEAM		Fc Barcelona	GP	W	D	L	GF	GA	PT
			38	34	0	4	0	0	0
TEAM		Celta De Vigo	GP	W	D	L	GF	GA	PT
			38	14	2	22	0	0	0
TEAM		RC Deportivo	GP	W	D	L	GF	GA	PT
			38	12	1	25	0	0	0