

StatsBomb Event Data Specification v1.0.2

[StatsBomb Event Data - last updated 14 May 2018]

Change Log

- Timestamps for each event performed by one team has to be unique.

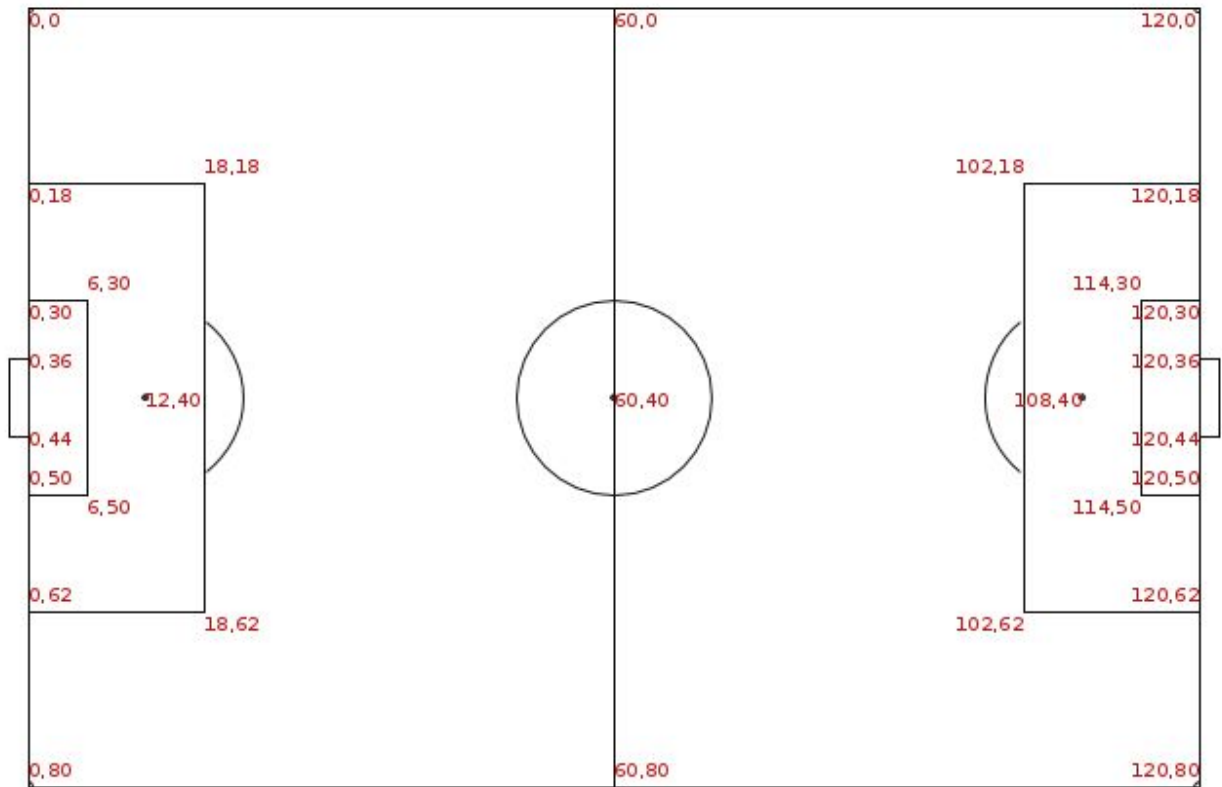
1. StatsBomb Event Data - General Attributes

StatsBomb Event Data comprises of the following general attributes:

Attribute	Attribute Value	Notes
ID		StatsBomb ID
Match ID		ID to the Match this is for
Last Updated		When this record was last altered
Time Stamp		The time on the clock of the event. Resets each period.
Duration		How long an event took (relevant to Passes/Shots/Pressure Primarily)
Period	First Half	
	Second Half	
	Extra Time 1	
	Extra Time 2	
	Penalties	
Minute		The minutes on the clock at the time of this event. Resets to 45 at half-time, 90 at the start of extra time etc.
Second		The seconds on the clock at the time of this event.
Sequence		Event ordering
Team-Sequence		Event ordering only using events of the Event's Team

Team Id		The Team this Event is Relevant to
Opponent Id		The Opposing Team
Event Type	See Event-Type Details in Section 2	What type of event is being described. Most events then have specific additional values relevant to them.
Player ID		If the event is specific to a Player (the passer / shooter / person behind substituted etc.), that Player. Required on most event types.
Player 2 ID		Receiver (or intended receiver) of the ball
Position-X		Coordinates for where the Event Occurred on the pitch. The pitch is 120 units long (feel free to think of the units as yards) and 80 units wide. Mandatory on Pitch Events. See pitch coordinates map below.
Position-Y		
Position-2-X		Coordinates for where a transitional Event (Pass/Shot) Finished on the pitch. The pitch is 120 units long (feel free to think of the units as yards) and 80 units wide. See pitch coordinates map below.
Position-2-Y		
Goal-Position-Y		Relevant to Shots/GK Freeze Frame Information. Goal Mouth Mapping. Mandatory on Goal Keeper and Shot events.
Goal-Position-Z		
Possession-Id	Integer, starting with 1 at kick off	Indicates the current unique possession in the game. A single possession denotes a period of play in which the ball is in play and a single team is in control of the ball. Not all events are guaranteed to be inside a possession, for example when the ball is loose or being contested.
Possession-TeamId	Integer, team ID	The ID of the team that started this possession in control of the ball. Note that this will appear even on opposition events like tackles attempted during the possession.
Possession-OppId	Integer, event ID	The ID of the opposite event in any kind of duel, e.g. a <i>Dispossessed</i> event related to a successful <i>Tackle</i> , the <i>Foul Committed</i> event related to a <i>Foul Won</i> .

Pitch Coordinates



2. StatsBomb Event Types

StatsBomb Data comprises of the following Events with the listed Outcomes and Attributes for each event:

2.1 Pitch Events (these are actions taken by players. All should have a player/position on pitch.)

Event Type ID	Event Type	Event Description	Attribute Group	Attribute	Attribute Description
33	50/50	2 players challenging to recover a loose ball.	50/50 Outcome	Success To Team	The player wins the 50/50 contest and knocks the ball to a his team's possession
			50/50 Outcome	Won	The player wins the 50/50 contest and regain possession
			50/50 Outcome	Success To Opposition	The player wins the 50/50 contest but knocks the ball to a opponent's possession
			50/50 Outcome	Lost	The player loses the 50/50 contest
42	Ball Receipt				The player and position a pass was intended for
2	Ball Recovery	An attempt to recover a loose ball	Ball recovery outcome	Offensive	Recovered ball lost by a teammate off bad touch or dribble
				Recovery Failure	Ball is lost while attempting to recover a loose ball
6	Block	Blocking the ball by standing in its path.	Optional extra	Deflection	Block that did not reverse or strongly redirect the ball's trajectory
				Offensive	
			Block outcome	Save Block	A block of a shot that was definitely going to be on target by an outfield player

9	Clearance	Action by a defending player to clear the danger without an intention to deliver it to a teammate.	Optional extra	Aerial Won	Clearance that was also an aerial duel won
3	Dispossessed	Player loses ball to an opponent as a result of being tackled by a defender without attempting a dribble			
14	Dribble	An attempt by a player to beat an opponent	Optional extra	Overrun	When a dribble goes past the original defender into the possession of another player
			Optional extra	Nutmeg	Dribble went through opposing players legs
			Dribble outcome	Complete	Dribble attempt was successful
			Dribble outcome	Incomplete	Player was unable to complete the act of attempting a dribble
39	Dribbled Past	Player is dribbled past by an opponent.			
4	Duel	A duel is an 50-50 contest between two players of opposing sides in the match.	Optional extra	Aerial Lost	Challenging for an aerial duel and not winning the ball
			Optional extra	Tackle	Dispossessing opposing team player
			Duel Outcome	Lost In Play	A tackle that knocked the ball to an opponent
			Duel Outcome	Lost Out	A tackle that knocked the ball out of bounds in favor of opposition
			Duel Outcome	Success In Play	A tackle that knocked the ball to a teammate
			Duel Outcome	Success Out	A tackle that knocked the ball out of bounds in favor of tackler's team
			Duel Outcome	Won	A tackle that ended up in possession of the tackler

21	Foul Won	A foul won is defined as where a player wins a free-kick or penalty for their team after being fouled by an opposing player.	Optional extra	Defensive	Winning a foul when out of possession
			Optional extra	Advantage	Winning a foul that was not called due to advantage played
			Outcome	Penalty	Winning a penalty
22	Foul Committed	Any infringement that is penalised as foul play by a referee. Offside are not tagged as a foul committed.	Optional extra	6 Seconds	Foul called due to 6 second infringement
			Optional extra	Backpass Pick	Foul called due to back-pass pick up infringement
			Optional extra	Dangerous Play	Foul called due to dangerous play
			Optional extra	Foul Out	Foul called due to foul out infringement
			Optional extra	Handball	Foul called due to handball infringement
			Optional extra	Dive	Foul committed due to simulation
			Optional extra	Penalty	A foul committed that resulted in a penalty shot
			Optional extra	Offensive	Foul committed when in possession of the ball
			Optional extra	Advantage	Foul committed but play was waved on
			Outcome	Red Card	Receiving a red card for a foul
			Outcome	Second Yellow	Receiving the a 2nd yellow card for a foul
			Outcome	Yellow Card	Receiving a yellow card for a foul
23	Goal Keeper	Actions that can be done by the goalkeeper.	Optional extra - GK Action	Collected	Keeper coming out to collect a ball
			Optional extra - GK Action	Goal Conceded	Goalkeeper concedes a goal
			Optional extra - GK Action	Keeper Sweeper	When keeper comes off his line and/or out of his box to clear the ball

			Optional extra - GK Action	Penalty Conceded	Goalkeeper concedes a goal from a penalty kick
			Optional extra - GK Action	Penalty Saved	Save from a penalty kick
			Optional extra - GK Action	Punch	Keeper punch away (similar to clear)
			Optional extra - GK Action	Save	Keeper save from a non-shot
			Optional extra - GK Action	Shot Faced	A shot faced that did not lead to a save or goal conceded
			Optional extra - GK Action	Shot Saved	Keeper save from opposing team shot
			Optional extra - GK Action	Smother	Equivalent to a tackle for an outfield player, keeper coming out to dispossess a player
			Optional extra - Body Part	Both Hands	Save with both hands
			Optional extra - Body Part	Chest	Save with chest
			Optional extra - Body Part	Head	Save with head
			Optional extra - Body Part	Left Foot	Save was made with left foot
			Optional extra - Body Part	Left Hand	Save with left hand
			Optional extra - Body Part	Right Foot	Save was made with right foot
			Optional extra - Body Part	Right Hand	Save with right hand
			Optional extra - GK Motion	Moving	Keeper was moving when the shot was taken
			Optional extra - GK Motion	Prone	Keeper was on the ground when the shot was taken
			Optional extra - GK Motion	Set	Keeper was stationary when the shot was taken

			Optional extra - GK Motion	Diving	Keeper left his feet in order to make the save
			Optional extra - GK Motion	Standing	Keeper made the save from a standing position
			GK Outcome	Claim	Keeper sweeper action where keeper collects the ball
			GK Outcome	Clear	Keeper sweeper action where keeper clears the ball
			GK Outcome	Collected Twice	Keeper collected the ball in multiple tries after fumbling first collect
			GK Outcome	Fail	Unsuccessful action
			GK Outcome	In Play	
			GK Outcome	In Play Danger	Goalkeeper save where shot is parried to opposing team player
			GK Outcome	In Play Safe	Goalkeeper save where shot is parried to teammate
			GK Outcome	Lost	Unable to retain possession
			GK Outcome	No Touch	Goal conceded without keeper touching the ball
			GK Outcome	Saved Twice	Keeper made the save in multiple tries after fumbling the first save
			GK Outcome	Success	Successful action for collect, parried to teammate in smother
			GK Outcome	Touched In	Goal conceded despite keeper touching the ball
			GK Outcome	Touched Out	Keeper touched the ball out of bounds
			GK Outcome	Won	Retained possession
30	Pass	An intended kick from one player to his teammate	Pass Height	Ground	Ball doesn't come off the ground.
31			Pass Height	Low	Ball comes off the ground but is under shoulder level at peak height.

32			Pass Height	High	Ball goes above shoulder level at peak height.
30, 31 or 32			Optional: Pass Type	Corner	A pass from a corner kick
			Optional: Pass Type	Free Kick	A pass from a free kick
			Optional: Pass Type	Goal Kick	A pass from a goal kick
			Optional: Pass Type	Interception	One touch pass off an interception
			Optional: Pass Type	Kick Off	A pass from a kick off at the beginning of a match or after scoring
			Optional: Pass Type	Recovery	One touch pass off a loose ball recovery
			Optional: Pass Type	Throw-in	A pass from a throw-in
			Optional: Body Part	Drop Kick	Pass is a keeper drop kick
			Optional: Body Part	Head	Pass with head
			Optional: Body Part	Keeper Arm	Pass thrown from keepers hands
			Optional: Body Part	Left Foot	Pass with left foot
			Optional: Body Part	Other	Other body part (chest,back, etc.)
			Optional: Body Part	Right Foot	Pass with right foot
			Optional: Body Part	Backheel	Pass is a backheel
			Optional: Pass Fail Type	Deflected	Pass was deflected but reached its destination
			Optional: Pass Fail Type	Miscommunication	Pass was accurate but receiving player misread the pass OR the run from the receiving player

					was correct and passer played in his previous position
			Optional extra	Through Ball	Pass cuts last line of defence
			Outcome: Failed Pass Reason	Incomplete	Ball does not reach a teammate and is still in play
			Outcome: Failed Pass Reason	Injury Clearance	Ball is played out of bounds to stop play for an injury
			Outcome: Failed Pass Reason	Out	Ball goes out of bounds
			Outcome: Failed Pass Reason	Pass Offside	Ball reaches teammate but pass is judged offside
			Outcome: Failed Pass Reason	Unknown	Outcome is unknown (i.e. foul was called while in mid-flight)
			Float	Length	The length in meters of the pass, from its origin to its destination.
			Float	Angle	The angle in radians of the pass, calculated clockwise from 0 representing straight ahead, to π meaning straight backwards.
			Boolean	Cross	Whether or not the pass was a cross. The calculation used to mark crosses is detailed in Appendix I.
			Boolean	Pull-Back	Whether or not the pass was a pull-back. The calculation used to mark pull-backs is detailed in Appendix I.
			Boolean	Switch of Play	Whether or not the passer switched the ball to the other side of the pitch. A switch is any pass that travels more than 40% of the width of the pitch.
			Integer, event ID	Assisted Shot	The ID of the shot or goal that the pass assisted

10	Interception	Preventing an opponent's pass from reaching their teammates by moving to the passing lane/reacting to intercept it.	Interception Outcome	Lost In Play	An interception that knocked the ball to an opponent
			Interception Outcome	Lost Out	An interception that knocked the ball out of bounds in favor of opposition
			Interception Outcome	Success In Play	An interception that knocked the ball to a teammate
			Interception Outcome	Success Out	An interception that knocked the ball out of bounds in favor of tackler's team
			Interception Outcome	Won	An interception that ended up in possession of the tackler
38	Miscontrol	Player loses ball due to bad touch			
8	Offside	Offside infringement. Cases resulting from a shot or clearance (non-pass). For passes resulting in an offside check pass outcomes section			
20	Own Goal Against	An own goal scored against the team			
25	Own Goal For	An own goal scored for the team.			
17	Pressure	Field Position and player 1 must always have a value (Field position shows the spot where the player started to apply pressure & the duration of the event shows the duration that he kept applying pressure)			
41	Referee Ball-Drop	Referee drops the ball to continue the game after an injury stoppage.			

28	Shield	Player shields ball going out of bounds to prevent opponent from keeping it in play.			
16	Shot	An attempt to score a goal, made with any (legal) part of the body.	Possible Extra - Play Type	Corner	Shot direct from a corner kick
			Possible Extra - Play Type	Free Kick	Shot is from a direct free kick
			Possible Extra - Play Type	Open Play	Shot is not directly from a set-piece
			Possible Extra - Play Type	Penalty	Shot is a penalty kick
			Possible Extra - Body Part	Head	Shot attempted with head
			Possible Extra - Body Part	Left Foot	Shot attempted with the left foot
			Possible Extra - Body Part	Other	Other body parts (i.e knee, chest, etc)
			Possible Extra - Body Part	Right Foot	Shot attempted with right foot
			Possible Extra	Aerial Won	An aerial duel was contested for the shot
			Possible Extra	Backheel	A shot that was taken with the heel
			Possible Extra	Diving Header	Shot attempted with header while player diving in front of him to reach the ball
			Possible Extra	Half Volley	Contact was made off the ground and after a bounce
			Possible Extra	Lob	A shot that had a high arc trajectory in order to pass over the opposition player
			Possible Extra	Normal	A shot that does not fall into any other technique
			Possible Extra	Overhead Kick	Player's back was to goal when taking the shot

			Possible Extra	Volley	The ball never touched the ground prior to the shot
			Possible Extra	Deflected	Shot was redirected by another players touch but ended with the original outcome
			Possible Extra	First Time	Player's first touch
			Shot Outcome	Blocked	A shot that was stopped from continuing by a defender
			Shot Outcome	Goal	A shot that was deemed to cross the goal-line by officials
			Shot Outcome	Off T	A shot that's initial trajectory ended outside the posts
			Shot Outcome	Post	A shot that hit one of the three posts
			Shot Outcome	Saved	A shot that was saved by the opposing team's keeper
			Shot Outcome	Wayward	An unthreatening shot that was way off target or did not have enough power to reach the goal line (or a miskick where the player didn't make contact with the ball)
			Shot Outcome	Redirect	Shot redirected from another shot
			Boolean	Follows Dribble	Whether or not this shot comes after a successful dribble by the shooter.
			Integer, event ID	Key Pass Id	The ID of the key pass that led to this shot (regardless of shot outcome).
			Integer, event ID	Assist Id	The ID of the key pass where a goal was scored from this shot
37	Error	When a player is judged to make an on-the-ball mistake that leads to a shot on goal.			

2.2 Information Events - May have a player, will not have a pitch position

Event Type ID	Event Type	Event Description	Attribute Name	Attribute Group	Attribute Description
24	Bad Behaviour		Card	Outcome	Red Card
			Card	Outcome	Second Yellow
			Card	Outcome	Yellow Card
29	Camera off	Video broadcast leaves gameplay and show a replay or video is cut.			
5	Camera On	Signals the stop of the camera to capture gameplay for a replay/video cut.			
34	Half End	Signals the referee whistle to finish a match part.			
18	Half Start	Signals referee whistle to start a match period.			
40	Injury Stoppage	A stop in play due to an injury.	Extra 1		In Chain
27	Player Off	A player goes/ is carried out of the pitch without a substitution.			
26	Player On	A player returns to the pitch after a Player Off event.			
35	Starting XI	Indicates the players in the starting 11, their			

		position and the team's formation.			
19	Substitution		Outcome		Injury
			Outcome		Tactical
36	Tactical Shift	Indicates a tactical shift made by the team, shows the players' new positions and the team's new formation.			