StatsBomb
Data Champions.

StatsBomb API 360 Frames Specification v2.0.0

[StatsBomb API - last updated 12 *September 2022]*

This document describes the API used to request a listing of the matches for which the user has licensed access, for a specified competition and season. Credentials need to be supplied as described in the general API notes.

Summary of Changes for v2.0.0

- Added the following keys to the 360 api response
    - line_breaking_pass
    - num_defenders_on_goal_side_of_actor
    - distance_to_nearest_defender
    - ball_receipt_space
    - visible_player_counts
    - distances_from_edge_of_visible_area

Accessing the API

The updated API can be accessed by making a request to
https://data.statsbombservices.com/api/v2/360-frames/?
where the question mark should be replaced with the desired match_id.

Response

The response will be in JSON format. The response is an array of 360 Frame objects, which have the following structure:

Variable	Variable Type	Variable Description
event_uuid	UUID	The unique identifier for the event matching this freeze frame.
visible_area	Array	An array of coordinates describing the polygon visible to the camera, from which the 360 freeze frame was collected. This shape makes it explicit which areas were visible. Player locations may be outside the visible area where these were manually placed. The format of the array is: [X1 Y1 X2 Y2... Xn Yn X1 Y1], describing a closed loop around the visible area of the pitch. The visible area can also be empty where the camera was not on the pitch at the time the frame was collected.
freeze_frame	Array	Like shots, this is an array of freeze frame objects, similar to those described in the Events API spec. However these freeze frames will not contain player identification, beyond their team (except for the player performing the current event who will be marked as the actor).
line_breaking_pass	Boolean	This value will be true if the event fulfilled the following criteria: a) It was a pass b) It crossed a defence line (a row of sufficiently closely spaced defenders) c) The ball made sufficient progression toward the centre of the goal
num_defenders_on_goal_side_of_actor	Integer	This is a count of all visible players of the actor's opposing team whose distance in the X direction from the goal is less than that of the actor.
distance_to_nearest_defender	Float	This is the distance (in standard pitch coordinates) of the actor from the nearest visible opposing team member.

ball_receipt_in_space	boolean	A data structure describing whether or not the event was a ball receipt in a significant area (of radius at least 2 yards) free of defenders
ball_receipt_exceeds_distance	Integer	An integer value of 2, 5 or 10, depending upon whether the ball receipt occurred within an area of at least that number of yards in radius
visible_player_counts	Array	A data structure containing counts of the visible players for each team (detail below)
distances_from_edge_of_visible_area	Array	A data structure containing the distance of each player from the edge of the visible area (detail below)

Freeze frame objects have the following structure:

Variable	Type	Notes
location	array [x,y]	The position of the player on the field, with coordinates oriented in the same direction as the linked event (i.e. the actor's team attacking 0 to 120 on the X axis.
teammate	boolean	Indicates the player plays on the same team as the 'actor' in this event.
actor	boolean	Indicates the current player is the same as the one performing the associated event.
keeper	boolean	Indicates this player is a keeper.

Visible Player Counts contains maps with the following structure:

Variable	Type	Notes
team_id	long	A team ID
count	integer	The number of visible players of the team with the given ID

Distances from the edge of visible area contains maps with the following structure:

Variable	Type	Notes
point_id	long	An identifier for each player
distance	float	The distance of the player from the closest edge of the visible area

This is a trivial sample of 360 data showing an event with two visible players:


```
[ {
  "event_uuid": "97a8f158-6d73-42c8-a49c-6cd186b3a106",
  "visible_area": [37, 80, 25, 0, 60, 0, 42, 80, 37, 80],
  "freeze_frame": [
    {
      "location": [ 104.2, 54.0 ],
      "teammate": true,
      "actor": true,
      "keeper": false
    },
    {
      "location": [ 104.2, 54.0 ],
      "teammate": false,
      "actor": false,
      "keeper": true
    }
  ]
}]
```


Notes

StatsBomb 360 date is currently collected, for the most part, from broadcast video. This means there are some caveats to working with the data:

- Not all 22 players will be visible in the frame.
- The visible_area attribute will not be available for every frame.
- Not all events in the match will receive a 360 frame.
- Some events will lack a player marked with the ‘actor’ attribute.
- The ‘keeper’ attribute will, in some rare cases, refer to the keeper on the same team as the ‘actor’, without being marked as a ‘teammate’.

[End of Document]