Prebid Programmatic Guaranteed

Overview

What is 'Programmatic Guaranteed'

Programmatic → flows through the multi-vendor ad tech ecosystem

Guaranteed → buyer and seller have entered into a contract:

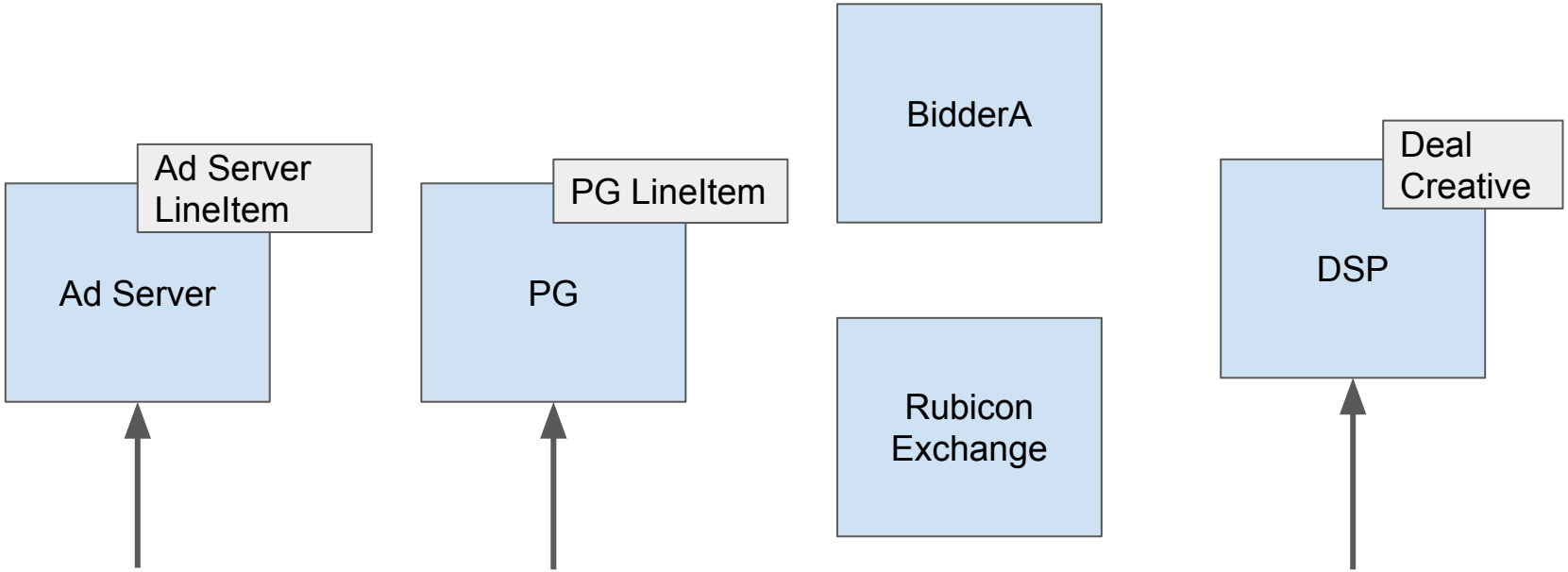
- to deliver a certain amount of impressions
- to a particular target
- over a particular date range

If contract isn't met, there may be financial penalties or extra impressions.

Goal of the PG Project

- Set up a "Line Item" for a Deal ID in the system and be able to deliver it smoothly, meeting the impression goal on the end date.
- Develop targeting and pacing algorithms in Prebid Server
- Teach it to figure out which Deals should serve on each impression request
- Design to be open source and multi-vendor

Setting up the Deal Line Item



Create LineItem targeting the 'PGrubicon' bidder with appropriate value and pacing info if desired.

Create LineItem with delivery info: deal ID, impression, date range, target, etc.

Enter creative so it delivers whenever deal ID is presented

Deals vs Line Items

A PG **'Line Item'** is the thing that can be paced:

- *a certain number of impressions*
- *to a particular target*
- *over specified dates*
- *Associated with a Deal ID*

A PG **'Deal'** could be larger than a single Line Item

- e.g. deal may have a display and video component

Ad Server Line Item Setup

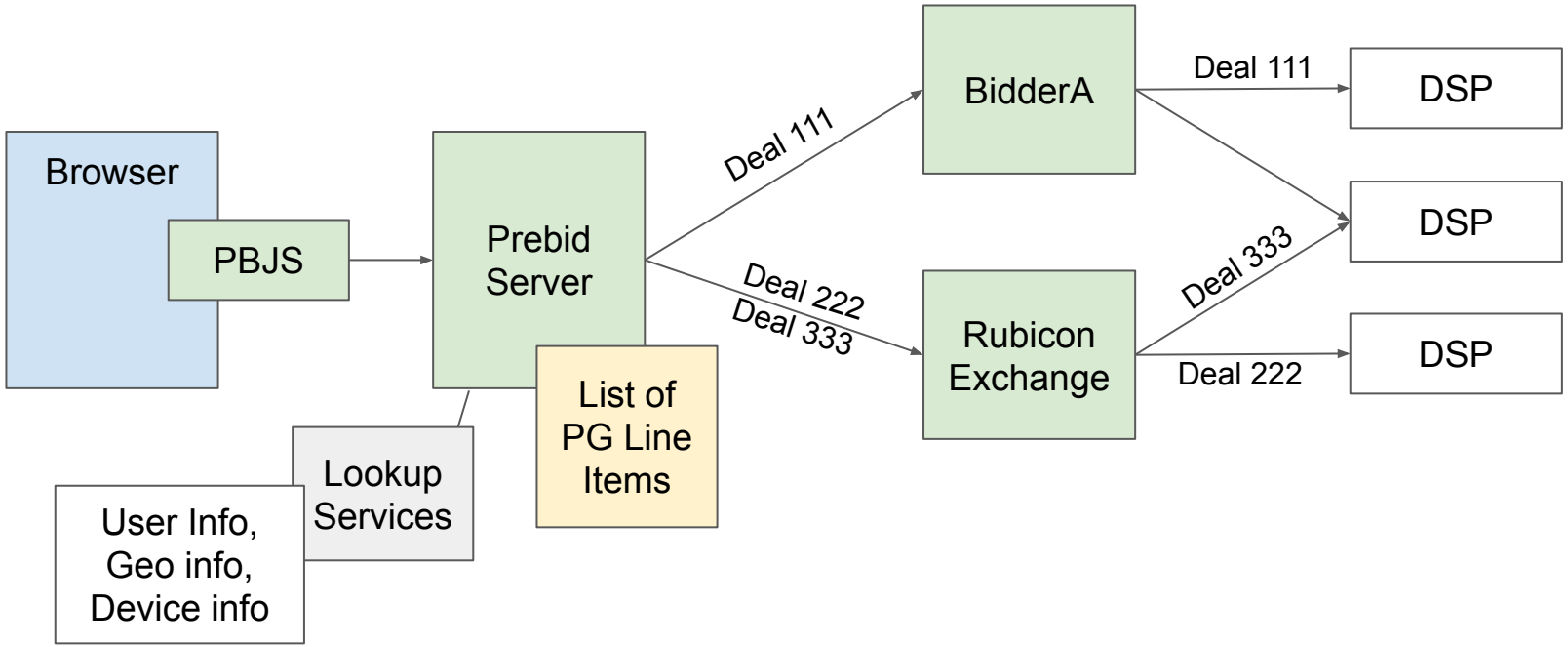
We envision two modes of line item setup in the ad server:

1. Enter date range, goal, CPM, and hb_deal_rubicon=12345 targeting. This would let the ad server make pacing decisions as well.
    a. Advantage: pacing reports in the ad server can be compared to reports from the PG UI provider.
2. Enter the line items as exclusives, so if the hb_deal_rubicon=12345 matches, and there's not a higher priority direct ad, it's chosen.

In neither case will the ad server know about the details of the Deal's targeting profile.

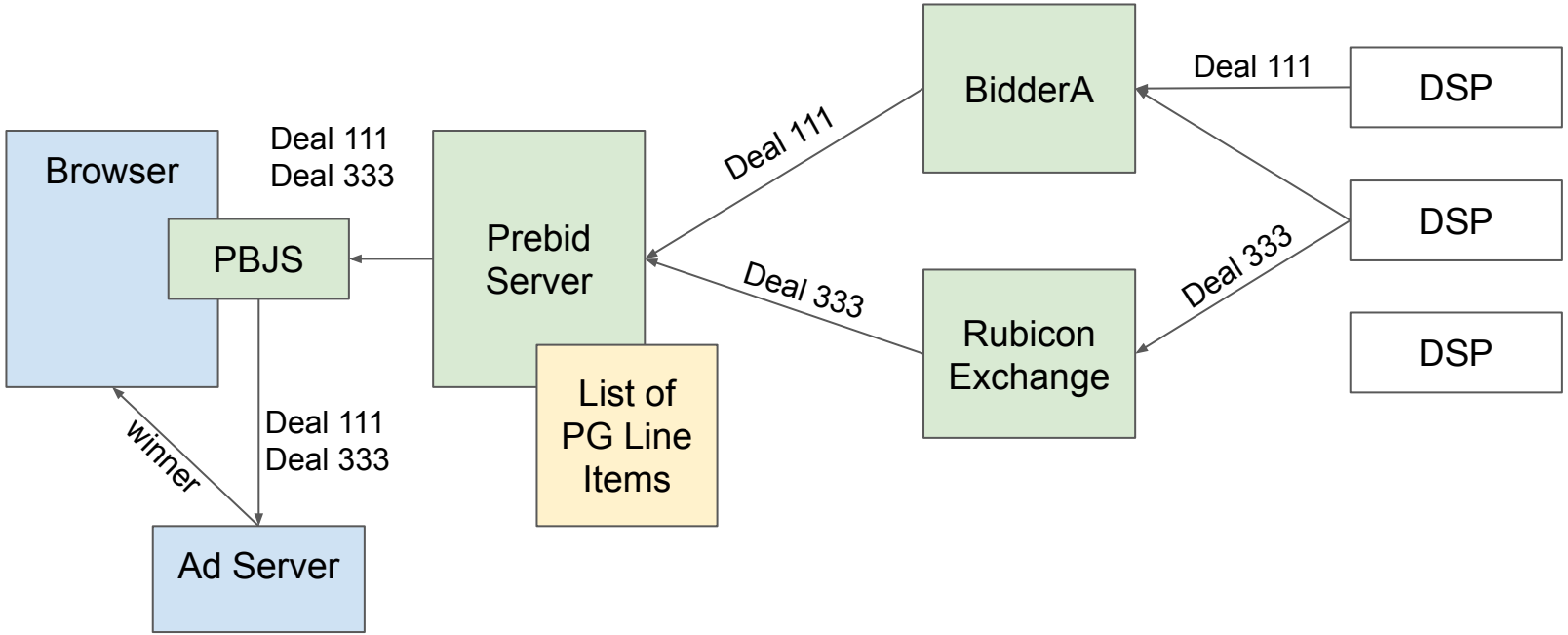
PG Line Items - High Level - Request

At the high level, delivery is similar to regular Prebid Server operation



PG Line Items - High Level - Response

At the high level, delivery is similar to regular Prebid Server operation



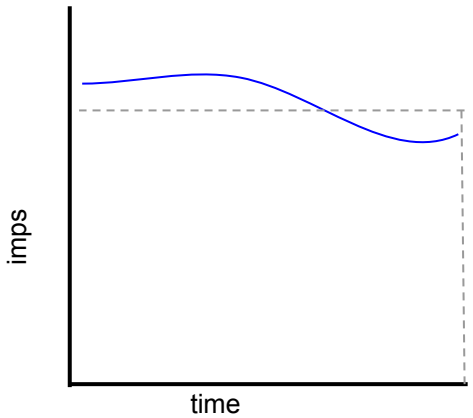
Lookup Services

- Deal Targeting requires data from several sources:
  - User ID info
    - Frequency capping status
    - User segmentation
  - Geographic info
  - Device info
- Prebid Server will call these services in parallel, waiting a defined amount of time for a response before resolving targeting.

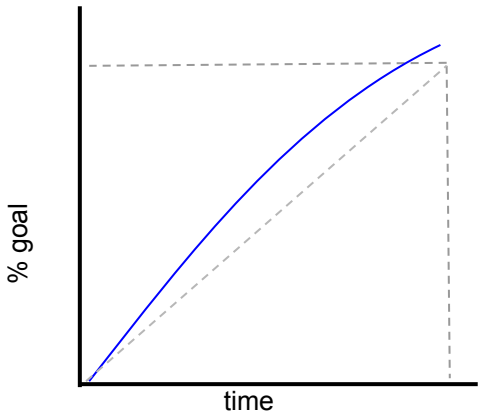
Good Delivery

Advertisers expect the daily delivery curve to be pretty smooth

Front-Loaded
Daily Delivery

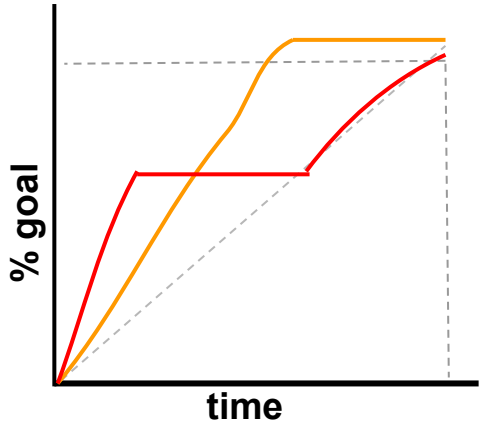


Front-Loaded
Cumulative Delivery

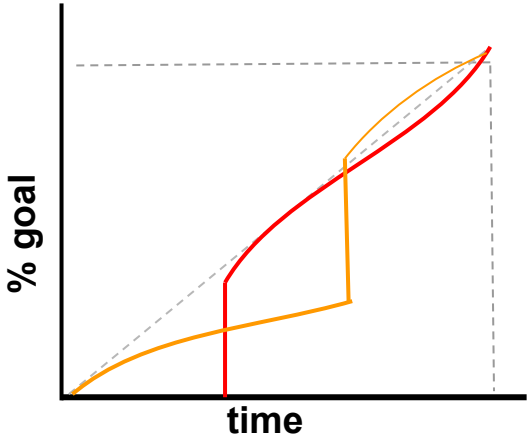


Behaviors to Avoid

Periods of no delivery

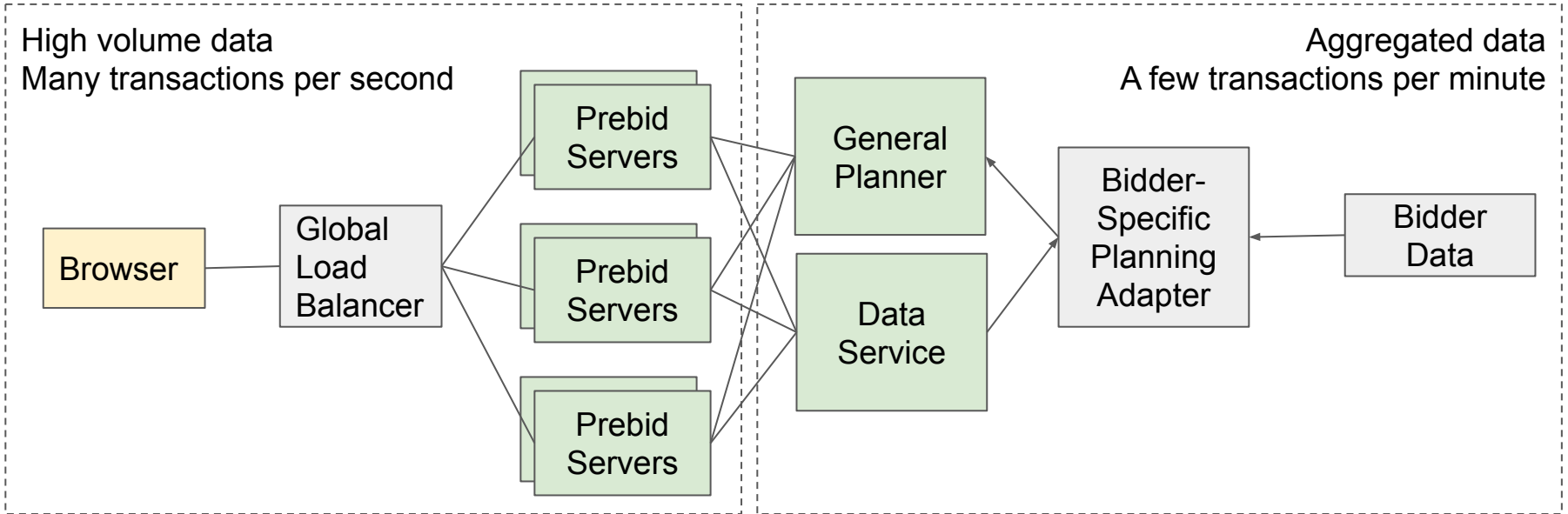


Massive delivery in one day



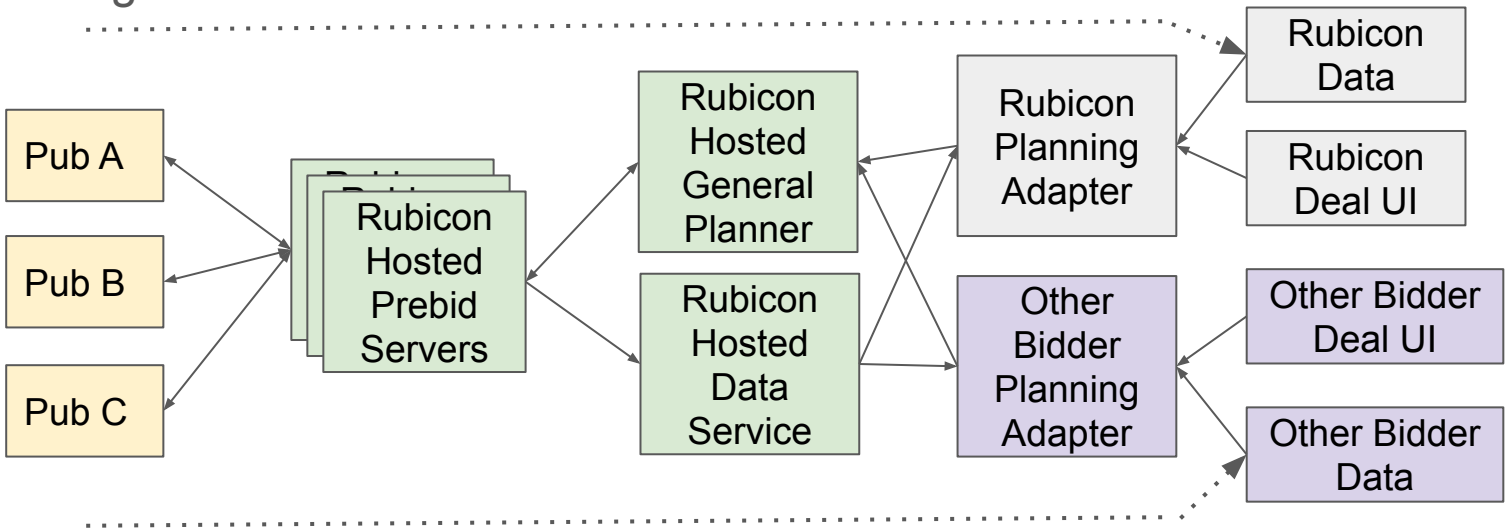
Runtime Architecture

- Prebid Server handles the distributed high-volume tasks
- New components are centralized and work with aggregated data



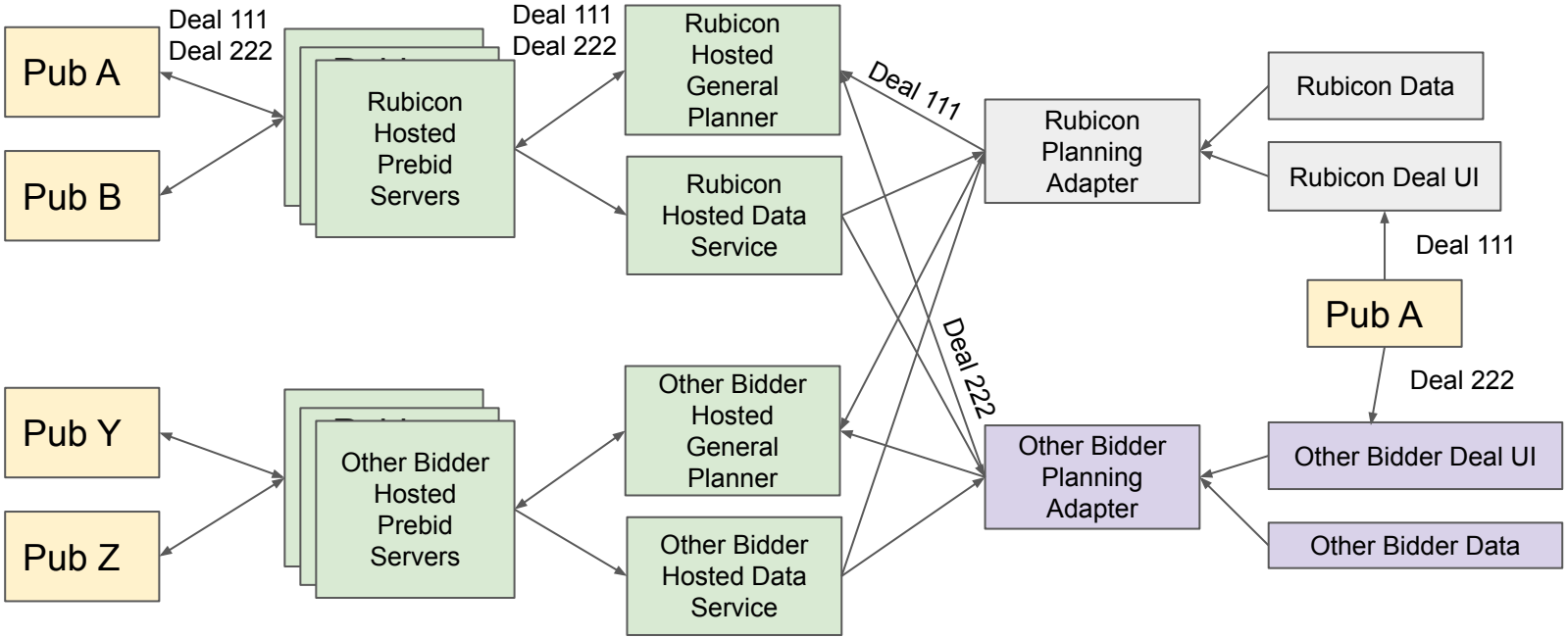
Multiple Exchanges

- Prebid is open source and multi-vendor, so multiple bidding partners are expected! Pubs can enter different deals into different UIs/planning systems.
- Each partner offers its own User Interface, own Line Items, own Planning Algorithms.



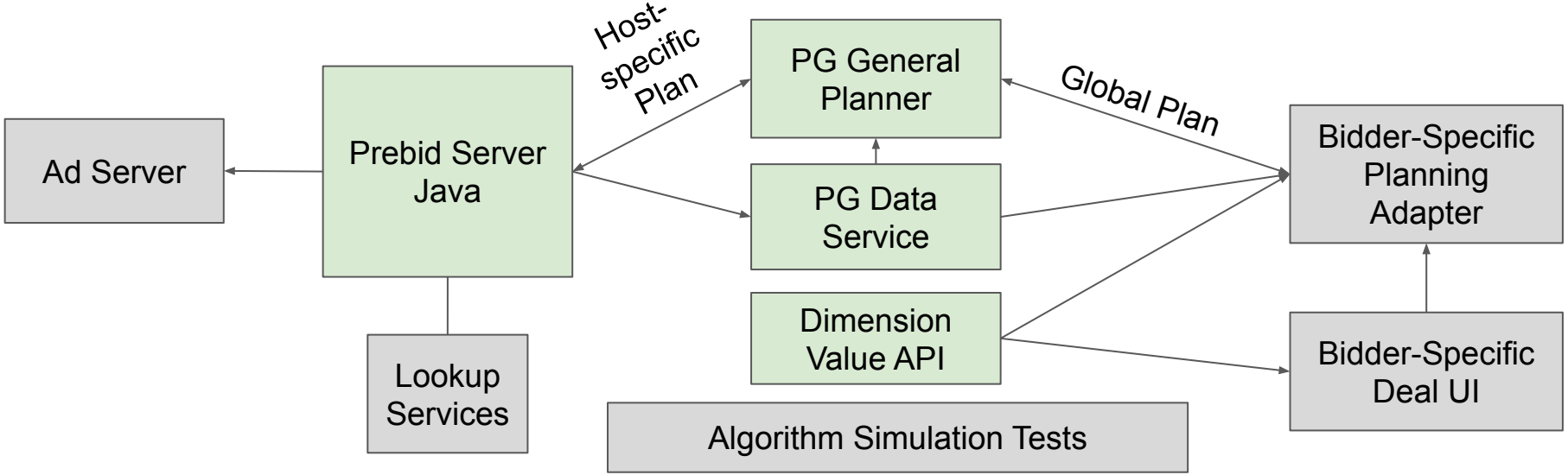
Full Network

- Pubs connect their servers to one Prebid hosting company, but may utilize multiple Deal systems.



Open Source Components

- We plan to release three components to the open source community: Prebid Server (Java), PG General Planner, and PG Data Service.



Dimension Value API

Each Prebid Server installation uses particular geo, device, and user segment vendors.

Bidders plugging into their environment need to know how to create targets, which values can be targeted. e.g. Is the country code 'gb', 'uk', or 'gbr'? Can you target 'iPhone 7+' or just 'iPhone'?

An API will be available that can be called by a user interface or other component that displays targeting values.

Each host company supplies the data that will be available at runtime.

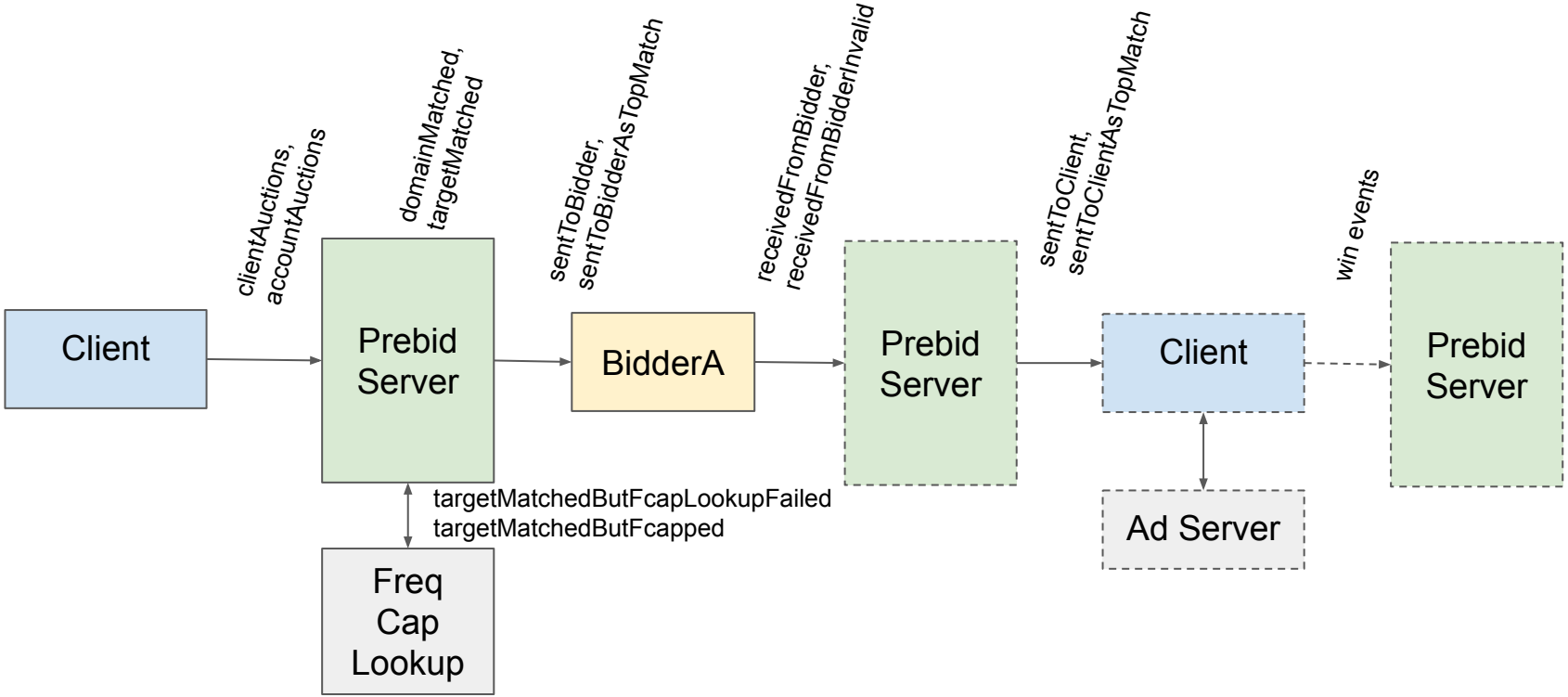
Features not part of Open Source

It's intended that these features would be implemented within a service offering from a vendor that's plugged into the PG infrastructure:

- User Interface (including reports)
- On-Pace Indicator
- Forecasting and Availability - we may consider open sourcing components at some point.

Metrics

- PG collects metrics at various points within the delivery funnel



Estimated Timeline

- 4Q2019 - Proposed external interfaces released
- 1Q2020 - Initial open source release
- 2H2020 - Forecast and Availability