Example OpenRTB bid request 1.

```
id: "BIDREQUEST_ID"
imp {
  id: "1"
  banner {
    w: 728
    h: 90
    pos: BELOW_THE_FOLD
    expdir: LEFT
    expdir: RIGHT
    expdir: UP
    expdir: DOWN
    format {
      w: 728
      h: 90
    }
  }
  tagid: "TAG_ID"
  bidfloor: 0.61
  bidfloorcur: "USD"
  secure: true
  metric {
    type: "click_through_rate"
    value: 0
    vendor: "EXCHANGE"
  }
  metric {
    type: "viewability"
    value: 0
    vendor: "EXCHANGE"
  }
  metric {
    type: "session_depth"
    value: 86
    vendor: "EXCHANGE"
  }
  [com.google.doubleclick.imp] {
    billing_id: "BILLING_ID"
    dfp_ad_unit_code: "/DFP_NETWORK_CODE/AD/UNIT/
PATH"
    ampad: AMP_AD_ALLOWED_AND_NOT_EARLY_RENDERED
  }
}
site {
  page: "PAGE_URL"
  publisher {
    id: "SELLER_NETWORK_ID"
    [com.google.doubleclick.publisher] {
      country: "GB"
    }
  }
  content {
    contentrating "DV-G"
    language "en"
  }
  mobile: true
```

What this specific person is reading right now

```
  [com.google.doubleclick.site] {
    amp: DIALECT_HTML
  }
}
}
device {
  ua: "Mozilla/5.0 (Linux; Android 4.4.4; SM-T560
Build/KTU84P) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/63.0.3239.111 Safari/537.36"
  ip: "IP_ADDRESS"
  geo {
    lat: 42.6495361328125
    lon: 23.35913848876953
    country: "BGR"
    city: "Sofia"
    utcoffset: 120
  }
  make: "samsung"
  model: "sm-t560"
  os: "android"
  osv: "4.4.4"
  devicetype: TABLET
  w: 1280
  h: 800
  pxratio: 1
}
user {
  id: "GOOGLE_USER_ID"
  buyeruid: "HOSTED_MATCH_USER_DATA"
  customdata: "HOSTED_MATCH_USER_DATA"
  data {
    id: "DetectedVerticals"
    name: "DoubleClick"
    segment {
      id: "5444"
      value: "0.3"
    }
    segment {
      id: "1080"
      value: "0.2"
    }
    segment {
      id: "1710"
      value: "0.1"
    }
    segment {
      id: "1715"
      value: "0"
    }
    segment {
      id: "96"
      value: "0"
    }
  }
}
tmax: 162
cur: "USD"
```

Distinctive information about this specific person's device

This specific person's IP address

This specific person's GPS coordinates

Various ID codes identifying this specific person, facilitating re-identification and tying to existing profiles

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Example OpenRTB bid request 2.

Source: "Sample bid requests: display mobile app request, OpenRTB 2.5", in Configuring an Exchange Bidding Integration, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/exchange-bidding).
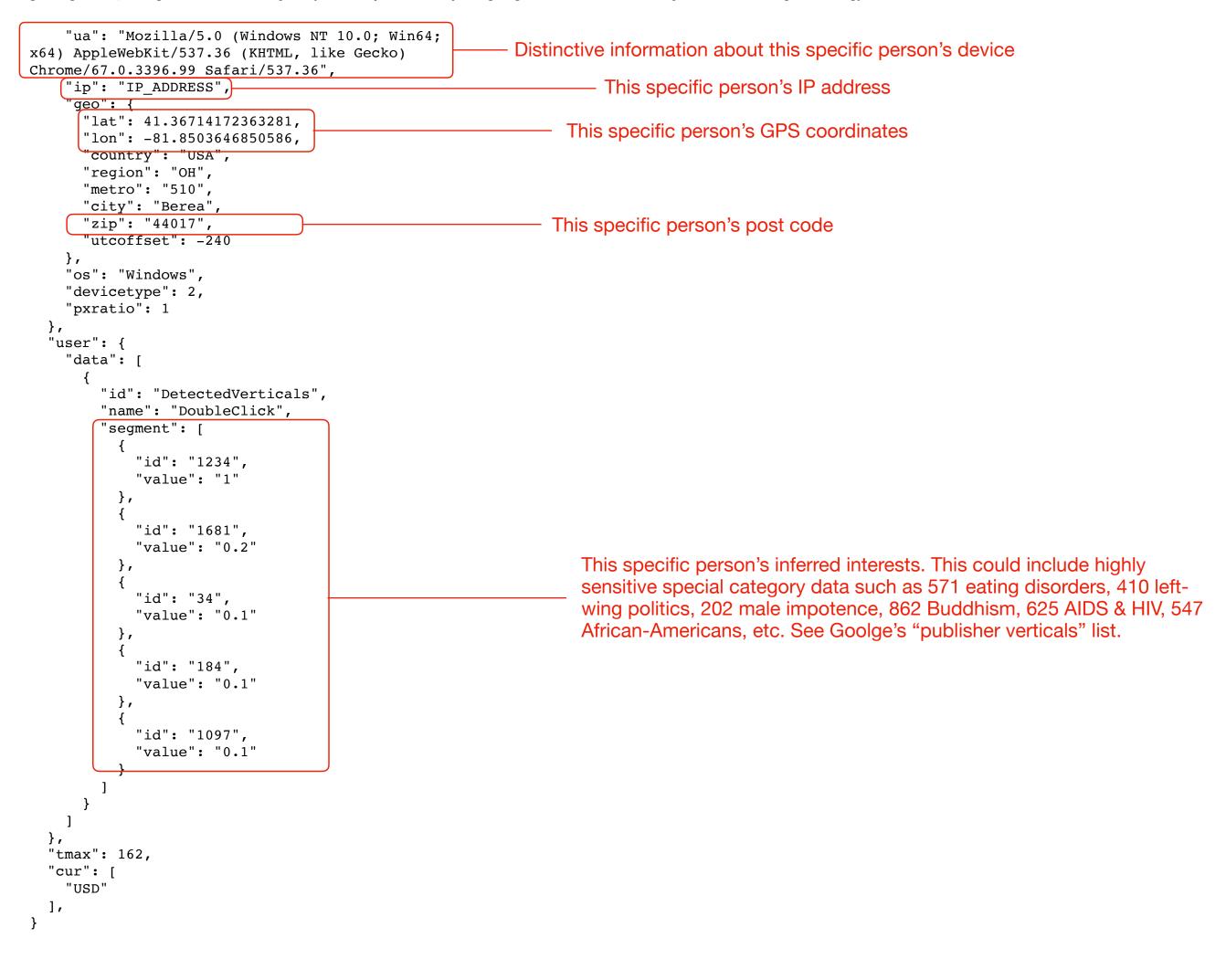
```
{
  "id": "BIDREQUEST_ID",
  "imp": [
    {
      "id": "1",
      "banner": {
        "w": 320,
        "h": 50,
        "pos": 1,
        "expdir": [
          1,
          2,
          3,
          4
        ],
        "api": [
          3,
          5
        ],
        "format": [
          {
            "w": 320,
            "h": 50
          },
          {
            "w": 300,
            "h": 50
          }
        ]
      },
      "tagid": "TAG_ID",
      "bidfloor": 0.01,
      "bidfloorcur": "USD",
      "secure": 1,
      "metric": [
        {
          "type": "viewability",
          "value": 0.8,
          "vendor": "EXCHANGE"
        },
        {
          "type": "session_depth",
          "value": 47,
          "vendor": "EXCHANGE"
        }
      ],
      "ext": {
        "billing_id": [
          "BILLING_ID"
        ],
        "dfp_ad_unit_code": "/DFP_NETWORK_CODE/AD/
UNIT/PATH",
        "ampad": 2
      }
    }
  ],
  "app": {
    "name": "APP_NAME",
    "cat": [
      "IAB5"
    ],
    "bundle": "BUNDLE_ID",
    "storeurl": "STORE_URL",
    "publisher": {
      "id": "SELLER_NETWORK_ID",
      "ext": {
```

```
      "country": "US"
    }
  },
  "content": {
    "url": "APP_STORE_URL",
    "contentrating": "DV-G",
    "language": "es"
  }
},
"device": {
  "ua": "Mozilla/5.0 (iPhone; CPU iPhone OS 11_4
like Mac OS X) AppleWebKit/605.1.15 (KHTML, like
Gecko) Mobile/15F79",
  "ip": "IP_ADDRESS",
  "geo": {
    "lat": 14.871365547180176,
    "lon": -91.48915100097656,
    "country": "GTM",
    "utcoffset": -360
  },
  "make": "apple",
  "model": "iphone",
  "os": "iOS",
  "osv": "11.4",
  "devicetype": 4,
  "ifa": "IDENTIFIER_FOR_ADVERTISERS",
  "hwv": "7",
  "w": 375,
  "h": 667,
  "pxratio": 2
},
"user": {
  "id": "GOOGLE_USER_ID",
  "data": [
    {
      "id": "DetectedVerticals",
      "name": "DoubleClick",
      "segment": [
        {
          "id": "1265",
          "value": "0.3"
        },
        {
          "id": "692",
          "value": "0.3"
        },
        {
          "id": "1462",
          "value": "0.3"
        }
      ]
    }
  ]
},
"tmax": 162,
"cur": [
  "USD"
]
}
```

— Distinctive information about this specific person's device

— This specific person's IP address

— This specific person's GPS coordinates

— Distinctive information about this specific person's device

— Google ID of this specific person

— The app this specific person is using right now

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Example OpenRTB bid request 3.

Source: "Sample bid requests: video desktop web request, OpenRTB 2.5", in Configuring an Exchange Bidding Integration, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/exchange-bidding).

```
{
  "id": "BIDREQUEST_ID",
  "imp": [
    {
      "id": "1",
      "video": {
        "mimes": [
          "application/javascript",
          "video/mp4"
        ],
        "linearity": 1,
        "maxduration": 32,
        "w": 400,
        "h": 225,
        "startdelay": 0,
        "playbackmethod": [
          6
        ],
        "pos": 1,
        "companionad": [
          {
            "w": 0,
            "h": 0,
            "mimes": [
              "image/gif",
              "image/jpeg",
              "image/png"
            ]
          }
        ],
        "api": [
          1,
          2
        ],
        "companiontype": [
          1
        ],
        "protocols": [
          2,
          3,
          5,
          6
        ],
        "skip": 1,
        "placement": 1
      },
      "displaymanager": "GOOGLE",
      "tagid": "TAG_ID",
      "bidfloor": 0.01,
      "bidfloorcur": "USD",
      "secure": 1,
      "metric": [
        {
          "type": "click_through_rate",
          "value": 0.03298969194293022,
          "vendor": "EXCHANGE"
        },
        {
          "type": "video_completion_rate",
          "value": 0.88453608751297,
          "vendor": "EXCHANGE"
        },
        {
          "type": "viewability",
          "value": 0.2,
          "vendor": "EXCHANGE"
        }
```

```
        },
        {
          "type": "session_depth",
          "value": 33,
          "vendor": "EXCHANGE"
        }
      ],
      "ext": {
        "billing_id": [
          "BILLING_IG"
        ],
        "dfp_ad_unit_code": "/DFP_NETWORK_CODE/AD/
UNIT/CODE/",
        "ampad": 2
      }
    }
  ],
  "site": {
    "page": "PAGE_URL",
    "publisher": {
      "id": "SELLER_NETWORK_ID",
      "ext": {
        "country": "US"
      }
    },
    "content": {
      "contentrating": "DV-G",
      "producer": {
        "domain": "PRODUCER_DOMAIN"
      },
      "language": "en"
    },
    "ext": {
      "amp": 0
    }
  },
  "device": {
    "ua": "Mozilla/5.0 (Windows NT 6.1; Win64;
x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/67.0.3396.99 Safari/537.36",
    "ip": "IP_ADDRESS",
    "geo": {
      "lat": 27.430912017822266,
      "lon": -82.41561889648438,
      "country": "USA",
      "region": "FL",
      "metro": "539",
      "city": "Bradenton",
      "zip": "34202",
      "utcoffset": -240
    },
    "os": "Windows",
    "devicetype": 2,
    "pxratio": 1
  },
  "user": {
    "id": "GOOGLE_USER_ID",
    "buyeruid": "HOSTED_MATCH_USER_DATA",
    "customdata": "HOSTED_MATCH_USER_DATA",
    "data": [
      {
        "id": "DetectedVerticals",
        "name": "DoubleClick",
        "segment": [
          {
            "id": "1071",
            "value": "0.3"
```

```
          },
          {
            "id": "353",
            "value": "0.8"
          },
          {
            "id": "1534",
            "value": "0.1"
          },
          {
            "id": "1533",
            "value": "0.1"
          },
          {
            "id": "1171",
            "value": "0.1"
          }
        ]
      }
    ]
  },
  "tmax": 162,
  "cur": [
    "USD"
  ]
}
```

— This specific person's inferred interests (continued)

— What this specific person is reading right now

— Distinctive information about this specific person's device

— This specific person's IP address

— This specific person's GPS coordinates

— Various ID codes that each this specific person, and can tie them to existing profiles

— This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Google's "publisher verticals" list.

Example OpenRTB bid request 4.

```
{
  "id": "BIDREQUEST_ID",
  "imp": [
    {
      "id": "1",
      "banner": {
        "w": 728,
        "h": 90,
        "pos": 3,
        "expdir": [
          1,
          2,
          3,
          4
        ],
        "format": [
          {
            "w": 728,
            "h": 90
          }
        ],
      },
      "tagid": "TAG_ID",
      "bidfloor": 1.06,
      "bidfloorcur": "USD",
      "secure": 1,
      "metric": [
        {
          "type": "click_through_rate",
          "value": 0.000010919653504970483,
          "vendor": "EXCHANGE"
        },
        {
          "type": "viewability",
          "value": 0.1,
          "vendor": "EXCHANGE"
        }
      ],
      "ext": {
        "billing_id": [
          "BILLING_ID"
        ],
        "dfp_ad_unit_code": "/DFP_NETWORK_CODE/AD/
UNIT/PATH",
        "ampad": 3
      }
    }
  ],
  "site": {
    "page": "PAGE_URL",
    "publisher": {
      "id": "SELLER_NETWORK_ID",
      "ext": {
        "country": "US"
      }
    },
    "content": {
      "contentrating": "DV-PG",
      "language": "en"
    },
    "ext": {
      "amp": 0
    }
  },
  "device": {
```

```
    "ua": "Mozilla/5.0 (Windows NT 10.0; Win64;
x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/67.0.3396.99 Safari/537.36",
    "ip": "IP_ADDRESS",
    "geo": {
      "lat": 41.36714172363281,
      "lon": -81.8503646850586,
      "country": "USA",
      "region": "OH",
      "metro": "510",
      "city": "Berea",
      "zip": "44017",
      "utcoffset": -240
    },
    "os": "Windows",
    "devicetype": 2,
    "pxratio": 1
  },
  "user": {
    "data": [
      {
        "id": "DetectedVerticals",
        "name": "DoubleClick",
        "segment": [
          {
            "id": "1234",
            "value": "1"
          },
          {
            "id": "1681",
            "value": "0.2"
          },
          {
            "id": "34",
            "value": "0.1"
          },
          {
            "id": "184",
            "value": "0.1"
          },
          {
            "id": "1097",
            "value": "0.1"
          }
        ]
      }
    ]
  },
  "tmax": 162,
  "cur": [
    "USD"
  ],
}
```

Distinctive information about this specific person's device

This specific person's IP address

This specific person's GPS coordinates

This specific person's post code

What this specific person is reading right now

This specific person's inferred interests. This could include 'highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Example OpenRTB bid request 5.

Source: "Example bid request", in OpenRTB Integration, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/openrtb-guide).

```
{
  "id": "V+u4DAAI8CEKG+PVxAwrsA",
  "imp": [
    {
      "id": "1",
      "banner": {
        "w": 320,
        "h": 480,
        "pos": 1,
        "api": [
          3,
          5
        ],
        "wmax": 360,
        "hmax": 640,
        "wmin": 320,
        "hmin": 280
      },
      "instl": 1,
      "tagid": "1",
      "bidfloor": 0.01,
      "bidfloorcur": "USD",
      "ext": {
        "billing_id": [
          "12345678901"
        ],
        "publisher_settings_list_id": [
          "12345678901234567890"
        ],
        "allowed_vendor_type": [
          113
        ]
      }
    }
  ],
  "app": {
    "name": "Super Speed VPN",
    "bundle": "com.example",
    "storeurl":"https://play.google.com/store/
apps/details?id=com.example",
    "publisher": {
      "id": "1"
    },
    "content": {
      "url": "https://play.google.com/store/apps/
details?id=com.example.free.vpn.proxy",
      "contentrating": "DV-G",
      "userrating": "4.2",
      "language": "en"
    }
  },
  "device": {
    "ua": "Mozilla/5.0...(Mobile; afma-sdk-a-
v9683236.8115000.2)",
    "ip": "123.456.789.0",
    "geo": {
      "country": "FRA",
      "utcoffset": 180
    },
    "make": "alcatel",
    "model": "5022d",
    "os": "android",
    "osv": "5.1",
    "devicetype": 4,
    "ifa": "ec162290-a098-43ac-9fac-411861ba2b1a",
    "w": 360,
    "h": 640,
    "pxratio": 2
  },
  "user": {
    "id": "CAESEPfSJVjdc8Mx2U_Dd3fQqvM"
  },
  "cur": [
    "USD"
  ]
}
```

Distinctive information about this specific person's device (continued)

Unique ID for this specific person

"User agent string", which contains distinctive information about this specific person's device

This specific person's IP address

Distinctive information about this specific person's device

Example OpenRTB bid request 6.

```
{
  "id": "WEejNwAL6doKG+LQcAQCnw",
  "imp": [
    {
      "id": "1",
      "banner": {
        "w": 360,
        "h": 592,
        "pos": 1,
        "api": [
          3,
          5
        ],
        "wmax": 360,
        "hmax": 592,
        "wmin": 250,
        "hmin": 250
      },
      "video": {
        "mimes": [
          "video/mp4",
          "video/webm",
          "video/x-flv"
        ],
        "maxduration": 10,
        "w": 360,
        "h": 592,
        "startdelay": 0,
        "playbackmethod": [
          1
        ],
        "pos": 1,
        "api": [
          3,
          5
        ],
        "protocols": [
          2,
          3,
          5,
          6
        ]
      },
      "instl": 1,
      "tagid": "1",
      "bidfloor": 0.09,
      "bidfloorcur": "EUR",
      "ext": {
        "billing_id": [
          "12345"
        ],
        "publisher_settings_list_id": [
          "15984503506551632562"]
      }
    }
  ],
  "app": {
    "name": "AppMyApp",
    "bundle": "fr.android.myapp",
    "storeurl": "https://play.google.com/store/
apps/details?id=fr.android.myapp",
    "publisher": {
      "id": "1"
    },
    "content": {
```

```
      "url": "https://play.google.com/store/apps/
details?id=fr.android.myapp",
      "contentrating": "DV-G",
      "userrating": "4.1",
      "language": "fr"
    }
  },
  "device": {
    "ua": "Mozilla/5.0...(Mobile; afma-sdk-a-
v10084448.9452000.2)",          ──── Distinctive information about this specific person's device
    "ip": "236.162.37.0",         ──── This specific person's IP address
    "geo": {
      "country": "FRA",
      "region": "FR-D",
      "zip": "71150",
      "utcoffset": 60
    },
    "make": "sony",
    "model": "e5633",
    "os": "android",
    "osv": "6.0",
    "devicetype": 4,
    "ifa": "6e552d9b-bf7f-43c8-85aa-9c0790007503",   ──── Distinctive information about this specific person's device
    "w": 360,
    "h": 592,
    "pxratio": 3
  },
  "user": {
    "id": "userid",              ──── Unique ID for this specific person
    "data": [
      {
        "id": "DetectedVerticals",
        "name": "DoubleClick",
        "segment": [
          {
            "id": "224",
            "value": "0.5"
          },
          {
            "id": "1461",
            "value": "0.5"
          }
        ]
      }
    ]
  },
  "cur": [
    "EUR"
  ],
  "bcat": [
    "IAB19-3"
  ]
}
```

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Example OpenRTB bid request 7.

```
{
  "id": "WEcgigALZ28KT74DlAEKdA",
  "imp": [
    {
      "id": "1",
      "tagid": "3654083237",
      "bidfloor": 0.75,
      "bidfloorcur": "USD",
      "native": {
        "request": "{\"ver\":\"1.0\"...\"style_width\":300}}",
        "ver": "1.0"
      },
      "ext": {
        "billing_id": [
          "1234567" ],
        "publisher_settings_list_id": [
          "17725875107190109537"],
        "allowed_vendor_type": [
          10,
          42 ]
      }
    }
  ],
  "site": {
    "page": "https://www.example.com/story/30139/common-reasons-of-breakups",     ———— What this individual person is reading right now
    "publisher": {
      "id": "1234"
    },
    "content": {
      "language": "en"
    },
    "mobile": 1
  },
  "device": {
    "ua": "Mozilla/5.0 .../en_US;FBOP/5]",     ———— Distinctive information about this specific person's device
    "ip": "104.191.75.0",     ———— This specific person's IP address
    "geo": {
      "country": "USA",
      "region": "US-TX",
      "metro": "641",
      "city": "San Antonio",
      "zip": "78259",
      "utcoffset": -360
    },
    "make": "apple",
    "model": "iphone",
    "os": "iOS",
    "osv": "10.2",
    "devicetype": 4,
    "w": 375,                  ———— Distinctive information about this specific person's device
    "h": 667,
    "pxratio": 2
  },
  "user": {
    "id": "CAESEI5Z85FbBUR-qiEz000000"     ———— Unique ID for this specific person
  },
  "cur": [
    "USD"
  ]
}
```

Example OpenRTB bid request 8.

Source: "Sample bid requests: App Banner", in Process the request, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/request-guide).

```
id:
"[\752\026\220\403\575\286\473\n\002x\373\068\020\
364\244"
ip: "\123\456\789"
google_user_id: "LSMGIWPSG98PHkdfuQ8KetJ-NSI"
cookie_version: 1
cookie_age_seconds: 7776000
user_agent: "Mozilla/5.0 (Linux; Android 7.1.1;
CPH1729 Build/N6F26Q; wv) Version/4.0"
publisher_country: "PK"
geo_criteria_id: 1010216
timezone_offset: 390
publisher_id: "pub-3450823458973402"
seller_network_id: 1
partner_id: 22222222
url: "https://play.google.com/store/apps/details?
id=com.sample.android"
detected_language: "th"
detected_vertical {
  id: 532
  weight: 0.25553104
}
detected_vertical {
  id: 108
  weight: 0.25553104
}
detected_vertical {
  id: 1461
  weight: 0.25553104
}
detected_vertical {
  id: 1109
  weight: 0.13587193
}
detected_vertical {
  id: 1170
  weight: 0.09753494
}
detected_content_label: 87
detected_content_label: 39
google_query_id: "ABCDefg1234567890/aB="
device {
  device_type: HIGHEND_PHONE
  platform: "android"
  brand: "oppo"
  model: "cph1729"
  os_version {
    major: 7
    minor: 1
    micro: 1
  }
  carrier_id: 72160
  screen_width: 360
  screen_height: 672
  screen_pixel_ratio_millis: 2000
  screen_orientation: PORTRAIT
}
mobile {
  is_app: true
  app_id: "com.example.android"
  app_category_ids: 60019
  app_category_ids: 60000
  app_category_ids: 69500
  encrypted_advertising_id: "[\340\333
\000\001<\286\nh\351\003\001\016\472\045\281Z\006\
037\21"
```
```
  advertising_id: "n\380\316:\038\239Kk\215\\
\357\011\021*_\304"
  app_name: "Example App Name"
  app_rating: 4.3381295
  supports_deep_link_with_fallback: true
}
publisher_settings_list_id: 234703467093485467
publisher_type: GOOGLE_REPRESENTED
adslot {
  id: 1
  ad_block_key: 1
  width: 320
  width: 360
  height: 50
  height: 50
  excluded_attribute: 22
  excluded_attribute: 34
  excluded_attribute: 27
  // ...
  excluded_attribute: 17
  excluded_attribute: 19
  excluded_attribute: 20
  allowed_vendor_type: 79
  allowed_vendor_type: 138
  allowed_vendor_type: 144
  // ...
  allowed_vendor_type: 828
  allowed_vendor_type: 4374
  allowed_vendor_type: 4513
  matching_ad_data {
    billing_id: 34589712304
    billing_id: 34010928357
    minimum_cpm_micros: 10000
  }
  matching_ad_data {
    billing_id: 90823842137
    minimum_cpm_micros: 10000
    direct_deal {
      direct_deal_id: 549644393846601047
      fixed_cpm_micros: 10000
      deal_type: AUCTION_PACKAGE
    }
  }
  publisher_settings_list_id: 234703467093485467
  slot_visibility: ABOVE_THE_FOLD
  viewability: 70
  click_through_rate: 0.0013543529
  renderer: GOOGLE
  is_amp_page: DIALECT_HTML
  amp_ad_requirement_type: AMP_AD_NOT_ALLOWED
  allowed_ad_types: ALLOWED_AD_TYPE_BANNER
  session_depth: 1
  api: MRAID_1
  api: MRAID_2
  api: OMID_1
}
response_deadline_ms: 122
```

Google ID of this specific person

Distinctive information about this specific person's device

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Distinctive information about this specific person's device

Distinctive information about this specific person's device (recipient can decode this)

Example OpenRTB bid request 9.

Source: "Sample bid requests: App Interstitial", in Process the request, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/request-guide).

```
id:
"[\752\026\220\403\575\286\473\n\002x\373\068\020\
364\244"
ip: "\123\456\789`·"
google_user_id: "LSMGIWPSG98PHkdfuQ8KetJ-NSI"
cookie_version: 1
cookie_age_seconds: 15552000
user_agent: "Mozilla/5.0 (Linux; Android 6.0.1;
SM-S327VL Build/MMB29M; wv) Version/4.0"
publisher_country: "US"
geo_criteria_id: 1013137
encrypted_hyperlocal_set:
"[\330\0106\000\6\210i\327\351:#\221\265\376n\"7}
`\223\215\213"
hyperlocal_set {
  hyperlocal {
    corners {
      latitude: 31.779715
      longitude: -85.942696
    }
    corners {
      latitude: 31.779715
      longitude: -85.928413
    }
    corners {
      latitude: 31.791855
      longitude: -85.928413
    }
    corners {
      latitude: 31.791855
      longitude: -85.942696
    }
    confidence: 1
  }
  center_point {
    latitude: 31.785786
    longitude: -85.935555
  }
}
timezone_offset: -300
publisher_id: "pub-3450923589486943"
seller_network_id: 2309
url: "https://play.google.com/store/apps/details?
id=com.sample.android"
detected_language: "en"
detected_vertical {
  id: 926
  weight: 0.29782212
}
detected_vertical {
  id: 1461
  weight: 0.29782212
}
detected_vertical {
  id: 105
  weight: 0.24140838
}
detected_vertical {
  id: 1173
  weight: 0.08253295
}
detected_vertical {
  id: 1109
  weight: 0.080414429
}
detected_content_label: 59
detected_content_label: 87
```

```
detected_content_label: 39
google_query_id: "ABCDefg1234567890/aB="
device {
  device_type: HIGHEND_PHONE
  platform: "android"
  brand: "samsung"
  model: "sm-s327vl"
  os_version {
    major: 6
    minor: 0
    micro: 1
  }
  carrier_id: 0
  screen_width: 360
  screen_height: 640
  screen_pixel_ratio_millis: 2000
  screen_orientation: PORTRAIT
}
mobile {
  is_app: true
  app_id: "com.example.android"
  is_interstitial_request: true
  app_category_ids: 60031
  app_category_ids: 60008
  app_category_ids: 60000
  app_category_ids: 69500
  encrypted_advertising_id:
"[\330\0106\000\005\037\03\177\
\^\205y\010\221\332\363\365wp\324/\223"
  advertising_id: "\295p\021(\205HJ}\602\219[|
\205@M\029"
  app_name: "Example App Name"
  app_rating: 4.4225764
  supports_deep_link_with_fallback: true
}
publisher_type: ADX_PUBLISHER_OWNED_AND_OPERATED
adslot {
  id: 1
  ad_block_key: 1
  width: 320
  width: 360
  height: 570
  height: 592
  excluded_attribute: 22
  excluded_attribute: 21
  excluded_attribute: 34
  // ...
  excluded_attribute: 19
  excluded_attribute: 20
  excluded_attribute: 70
  allowed_vendor_type: 10
  allowed_vendor_type: 42
  allowed_vendor_type: 43
  // ...
  allowed_vendor_type: 886
  allowed_vendor_type: 888
  allowed_vendor_type: 889
  excluded_sensitive_category: 19
  excluded_sensitive_category: 4
  excluded_sensitive_category: 23
  // ...
  excluded_sensitive_category: 8
  excluded_sensitive_category: 24
  excluded_sensitive_category: 18
  excluded_product_category: 10031
  excluded_product_category: 10086
  excluded_product_category: 10088
```

```
// ...
excluded_product_category: 13423
excluded_product_category: 13426
excluded_product_category: 13525
matching_ad_data {
  billing_id: 34589712304
  minimum_cpm_micros: 1000000
  direct_deal {
    direct_deal_id: 109283597182375038
    fixed_cpm_micros: 11000000
    deal_type: PREFERRED_DEAL
    publisher_blocks_overridden: true
  }
}
publisher_settings_list_id: 234703467093485467
publisher_settings_list_id: 239048937568472058
slot_visibility: ABOVE_THE_FOLD
viewability: 80
renderer: GOOGLE
is_amp_page: DIALECT_HTML
amp_ad_requirement_type: AMP_AD_NOT_ALLOWED
allowed_ad_types: ALLOWED_AD_TYPE_BANNER
session_depth: 6
api: MRAID_1
api: MRAID_2
api: OMID_1
}
response_deadline_ms: 122
```

Annotations:

- Google ID of this specific person
- Distinctive information about this specific person's device
- This specific person's location
- This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.
- This specific person's inferred interests (continued)
- Distinctive information about this specific person's device
- Distinctive information about this specific person's device (recipient can decode this)

Example OpenRTB bid request 10.

Source: "Sample bid requests: App Interstitial video", in Process the request, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/request-guide).

```
id:
"[\752\026\220\403\575\286\473\n\002x\373\068\020\
364\244"
ip: "\123\456\789"
google_user_id: "LSMGIWPSG98PHkdKetJ-NSI"
cookie_version: 1
cookie_age_seconds: 31104000
user_agent: "Mozilla/5.0 (iPhone; CPU iPhone OS
12_0 like Mac OS X) Mobile/16A366"
publisher_country: "FR"
geo_criteria_id: 9061365
timezone_offset: 480
publisher_id: "pub-2359083496729834"
seller_network_id: 1
partner_id: 247939003805104532
url: "https://itunes.apple.com/app/id1423046460"
detected_language: "zh_CN"
detected_vertical {
  id: 926
  weight: 0.30560419
}
detected_vertical {
  id: 1462
  weight: 0.30560419
}
detected_vertical {
  id: 935
  weight: 0.30560419
}
detected_vertical {
  id: 933
  weight: 0.041680388
}
detected_vertical {
  id: 622
  weight: 0.041507009
}
detected_content_label: 59
detected_content_label: 87
detected_content_label: 41
google_query_id: "ABCDefg1234567890/aB="
device {
  device_type: HIGHEND_PHONE
  platform: "iphone"
  brand: "apple"
  model: "iphone"
  os_version {
    major: 12
    minor: 0
  }
  carrier_id: 70121
  screen_width: 414
  screen_height: 736
  screen_pixel_ratio_millis: 3000
  screen_orientation: PORTRAIT
  hardware_version: "iphone 7+"
}
mobile {
  is_app: true
  app_id: "2394084589"
  is_interstitial_request: true
  app_category_ids: 60506
  app_category_ids: 60524
  app_category_ids: 60500
  app_category_ids: 69500
```

Google ID of this specific person

Distinctive information about this specific person's device

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Distinctive information about this specific person's device

```
  encrypted_advertising_id:
"[\331GJ\000\008J\220\n*\136\435\701356a;
\314\276\396\003*\102\306\010"
  advertising_id: "P\634\994\212(\0397C
\008W\239\286\278S\114\797"
  app_name: "Example App Name"
  supports_deep_link_with_fallback: true
}
video {
  placement: INTERSTITIAL
  playback_method: CLICK_TO_PLAY
  is_clickable: true
  videoad_start_delay: 0
  max_ad_duration: 60000
  video_ad_skippable: ALLOW_SKIPPABLE
  protocols: VAST_2_0
  protocols: VAST_3_0
  protocols: VAST_2_0_WRAPPER
  protocols: VAST_3_0_WRAPPER
  allowed_video_formats: VIDEO_MP4
  end_cap_support: END_CAP_OPTIONAL
}
publisher_settings_list_id: 234703467093485467
publisher_type: GOOGLE_REPRESENTED
adslot {
  id: 1
  ad_block_key: 1
  width: 414
  width: 375
  height: 736
  height: 667
  excluded_attribute: 114
  excluded_attribute: 21
  excluded_attribute: 34
  // ...
  excluded_attribute: 19
  excluded_attribute: 70
  excluded_attribute: 21
  allowed_vendor_type: 79
  allowed_vendor_type: 138
  allowed_vendor_type: 144
  // ...
  allowed_vendor_type: 828
  allowed_vendor_type: 4374
  allowed_vendor_type: 4513
  matching_ad_data {
    billing_id: 34589712304
    minimum_cpm_micros: 90000
  }
  slot_visibility: ABOVE_THE_FOLD
  viewability: 90
  click_through_rate: 0.10483477
  video_completion_rate: 0.58322155
  renderer: GOOGLE
  is_amp_page: DIALECT_HTML
  amp_ad_requirement_type: AMP_AD_NOT_ALLOWED
  is_rewarded: true
  allowed_ad_types: ALLOWED_AD_TYPE_VIDEO
  session_depth: 1
  api: MRAID_1
  api: MRAID_2
}
response_deadline_ms: 12
```

Distinctive information about this specific person's device (recipient can decode this)

Example OpenRTB bid request 11.

Source: "Sample bid requests: App Native", in Process the request, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/request-guide).

```
id:
"[\752\026\220\403\575\286\473\n\002x\373\068\020\
364\244"
ip: "\123\456\789"
google_user_id: "LSMGIWPSG98PHkdfuQ8KetJ-NSI"
cookie_version: 1
cookie_age_seconds: 864000
user_agent: "Mozilla/5.0 (Linux; Android 7.0;
Version/4.0 (Mobile; afma-sdk-a-
v14366020.14366020.0)"
publisher_country: "TR"
geo_criteria_id: 21060
timezone_offset: 180
publisher_id: "pub-3456783590486394"
seller_network_id: 12930
url: "https://play.google.com/store/apps/details?
id=com.sample.android"
detected_language: "tr"
detected_vertical {
  id: 1781
  weight: 0.21684243
}
detected_vertical {
  id: 294
  weight: 0.21684243
}
detected_vertical {
  id: 1461
  weight: 0.21684243
}
detected_vertical {
  id: 211
  weight: 0.21684243
}
detected_vertical {
  id: 501
  weight: 0.13263032
}
detected_content_label: 87
detected_content_label: 39
google_query_id: "ABCDefg1234567890/aB="
device {
  device_type: "HIGHEND_PHONE"
  platform: "android"
  brand: "vestel"
  model: "venus e3"
  os_version: {
    major: 7
    minor: 0
  }
  carrier_id: 71351
  screen_width: 360
  screen_height: 592
  screen_pixel_ratio_millis: 2000
  screen_orientation: PORTRAIT
}
mobile {
  is_app: true
  app_id: "com.example.android"
  is_interstitial_request: true
  app_category_ids: 60022
  app_category_ids: 60000
  app_category_ids: 69500
  encrypted_advertising_id:
"[\130\700\761\000\010\392/\n\342\034\272\035E\316
\301a\331\346\351\222"
```

Google ID of this specific person

Distinctive information about this specific person's device

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Distinctive information about this specific person's device

Distinctive information about this specific person's device (recipient can decode this)

```
  advertising_id: "\015\")
\004\355\372B\271\517Z\245 \210\387\004\272"
  app_name: "Example App Name"
  app_rating: 3.9649277
}
publisher_type: ADX_PUBLISHER_OWNED_AND_OPERATED
adslot {
  id: 1
  ad_block_key: 1
  width: 320
  width: 300
  width: 360
  height: 480
  height: 250
  height: 592
  excluded_attribute: 22
  excluded_attribute: 34
  excluded_attribute: 30
  // ...
  excluded_attribute: 18
  excluded_attribute: 19
  excluded_attribute: 20
  allowed_vendor_type: 3
  allowed_vendor_type: 42
  allowed_vendor_type: 79
  // ...
  allowed_vendor_type: 4463
  allowed_vendor_type: 4513
  allowed_vendor_type: 4538
  excluded_sensitive_category: 19
  excluded_sensitive_category: 4
  excluded_sensitive_category: 23
  // ...
  excluded_sensitive_category: 24
  excluded_sensitive_category: 7
  excluded_sensitive_category: 18
  matching_ad_data {
    billing_id: 34589712304
    minimum_cpm_micros: 340000
  }
  publisher_settings_list_id: 234703467093485467
  publisher_settings_list_id: 345973469730948534
  publisher_settings_list_id: 349082093423498239
  slot_visibility: ABOVE_THE_FOLD
  viewability: 80
  native_ad_template {
    required_fields: 83
    recommended_fields: 132
    headline_max_safe_length: 25
    body_max_safe_length: 90
    call_to_action_max_safe_length: 15
    image_width: 1200
    image_height: 627
    app_icon_width: 100
    app_icon_height: 100
    style_id: 148033
    style_height: 480
    style_width: 320
  }
  renderer: GOOGLE
  is_amp_page: DIALECT_HTML
  amp_ad_requirement_type: AMP_AD_NOT_ALLOWED
  allowed_ad_types: ALLOWED_AD_TYPE_BANNER
  allowed_ad_types: ALLOWED_AD_TYPE_NATIVE
  session_depth: 1
  api: MRAID_1
  api: MRAID_2
```

Distinctive information about this specific person's device

```
  api: OMID_1
}
response_deadline_ms: 122
```

Example OpenRTB bid request 12.

Source: "Sample bid requests: Web Video", in Process the request, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/request-guide).

```
id:
"[\752\026\220\403\575\286\473\n\002x\373\068\020\
364\244"
ip: "\123\456\789"
google_user_id: "LSMGIWPSG98PHkdfuQ8KetJ-NSI"
cookie_version: 1
cookie_age_seconds: 54432000
user_agent: "Mozilla/5.0 (Windows NT 10.0; Win64;
x64) Chrome/64.0.3282.140 Safari/537.36"
publisher_country: "US"
geo_criteria_id: 9028715
postal_code: "80013"
encrypted_hyperlocal_set:
"[T\204bo\253sP\22t\212\034L\320\004v{\002\002;\30
05BN\320&B{\214\376"
hyperlocal_set {
  hyperlocal {
    corners {
      latitude: 39.673466
      longitude: -104.78887
    }
    corners {
      latitude: 39.673466
      longitude: -104.77368
    }
    corners {
      latitude: 39.685158
      longitude: -104.77368
    }
    corners {
      latitude: 39.685158
      longitude: -104.78887
    }
    confidence: 1
  }
  center_point {
    latitude: 39.67931
    longitude: -104.78128
  }
}
timezone_offset: -360
publisher_id: "pub-1135235964000000"
publisher_id: "pub-2345925947623459"
seller_network_id: 12478
url: "http://example-site.com"
detected_language: "en"
detected_vertical {
  id: 1222
  weight: 0.22242239
}
detected_vertical {
  id: 182
  weight: 0.15736783
}
detected_vertical {
  id: 1779
  weight: 1
}
detected_vertical {
  id: 978
  weight: 0.091986381
}
detected_vertical {
  id: 594
  weight: 0.066870265
}
detected_content_label: 58
```

```
detected_content_label: 57
detected_content_label: 52
detected_content_label: 41
google_query_id: "ABCDefg1234567890/aB="
device {
  device_type: PERSONAL_COMPUTER
  platform: "Windows"
  screen_pixel_ratio_millis: 1000
}
video {
  placement: INSTREAM
  is_embedded_offsite: true
  playback_method: CLICK_TO_PLAY
  is_clickable: true
  videoad_start_delay: 0
  max_ad_duration: 33000
  video_ad_skippable: ALLOW_SKIPPABLE
  protocols: VAST_2_0
  protocols: VAST_3_0
  protocols: VAST_2_0_WRAPPER
  protocols: VAST_3_0_WRAPPER
  allowed_video_formats: VIDEO_MP4
  allowed_video_formats: VPAID_JS
  companion_slot {
    height: 0
    width: 0
    creative_format: IMAGE_CREATIVE
  }
}
publisher_type: ADX_PUBLISHER_OWNED_AND_OPERATED
adslot {
  id: 1
  ad_block_key: 4390234589
  width: 300
  height: 250
  excluded_attribute: 114
  excluded_attribute: 21
  excluded_attribute: 48
  // ...
  excluded_attribute: 18
  excluded_attribute: 19
  excluded_attribute: 20
  allowed_vendor_type: 3
  allowed_vendor_type: 42
  allowed_vendor_type: 79
  // ...
  allowed_vendor_type: 4463
  allowed_vendor_type: 4513
  allowed_vendor_type: 4538
  allowed_restricted_category: 33
  allowed_restricted_category_for_deals: 33
  matching_ad_data {
    billing_id: 34589712304
    billing_id: 23059813459
    minimum_cpm_micros: 2630000
  }
  matching_ad_data {
    billing_id: 34589719348
    minimum_cpm_micros: 19000000
  }
  publisher_settings_list_id: 234703467093485467
  publisher_settings_list_id: 239842903758476379
  slot_visibility: ABOVE_THE_FOLD
  viewability: 10
  click_through_rate: 0.11110414
  video_completion_rate: 0.76242161
  iframing_state: CROSS_DOMAIN_IFRAME
```

```
  renderer: GOOGLE
  is_amp_page: DIALECT_HTML
  amp_ad_requirement_type: AMP_AD_NOT_ALLOWED
  allowed_ad_types: ALLOWED_AD_TYPE_VIDEO
}
response_deadline_ms: 122
```

Annotations:

- **Google ID of this specific person** → google_user_id
- **Distinctive information about this specific person's device** → user_agent
- **This specific person's location** → hyperlocal_set
- **What this specific person is reading right now** → url
- **This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.** → detected_vertical
- **This specific person's inferred interests (continued)** → detected_content_label

Example OpenRTB bid request 13.

Source: "Sample bid requests: Web Video", in Process the request, Google Authorized Buyers (URL: https://developers.google.com/authorized-buyers/rtb/request-guide).

```
id:
"\752\026\220\403\575\286\473\n\002x\444\068\020\5
55\244"
ip: "\123\456\789",
google_user_id: "CAESEIlkhgWEXB8puccbUaNw",
cookie_version: 1
cookie_age_seconds: 28512000
hosted_match_data: "PkW0X2qZdBTADoopHums",
user_agent: "Mozilla/5.0 (Linux; Android 6.0;)
Chrome/67.0.3396.87 Mobile Safari/537.36"
publisher_country: "US",
geo_criteria_id: 9028715
timezone_offset: 180
publisher_id: pub-5678906767888
seller_network_id: 9834569
partner_id: 9123452613444478685,
url: "https://play.google.com/store/apps/details?
id=com.sample.android",
detected_language: "en"
detected_vertical: {
    id: 3421
    weight: 1
}
    id: 519 {
    weight: 0.75
}
    id: 8456 {
    weight: 0.5
}
detected_content_label: 26,555,56,42
google_query_id: "ANy-zJFf-
CaduPzxswevfgt789RAtHFe5WGM4OzC3s2CqEE81ZUC1RUAwFc
mLo",
device: {
    device_type: "HIGHEND_PHONE",
    platform: "android",
    brand: "infinix",
    model: "note 3",
    os_version: {
        major: 6,
        minor: 0
    },
    carrier_id: 1,
    screen_width: 360,
    screen_height: 640,
    screen_pixel_ratio_millis: 3000
}
mobile: {
    is_app: false,
    is_mobile_web_optimized: true,
}
video: {
  placement: "IN_ARTICLE",
  playback_method:
"INITIATE_ON_ENTERING_VIEWPORT_SOUND_OFF",
  is_clickable: true,
  video_ad_skippable: "ALLOW_SKIPPABLE",
  protocols:
[VAST_2_0,VAST_3_0,VAST_2_0_WRAPPER,VAST_3_0_WRAPP
ER]
    allowed_video_formats:   [VIDEO_MP4]
}
publisher_type: ADX_PUBLISHER_REPRESENTED
adslot: {
  id: 6,
  ad_block_key: 4146155563
  width:   300,250
  height:   250,250
  excluded_attribute:
[114,34,32,30,27,26,70,15,13,,25,26,27,13,14,15,16
,17,18,19,20,25,26,27,70]
  allowed_vendor_type:
[42,79,138,144,237,238,486,575,623,698,704,826,828
,832,880,884,885,889],
  excluded_sensitive_category:
[36,27,19,4,23,30,10,3,31,5,8,37,24,7,18]
  excluded_product_category:
[10001,10031,10106,10146,10550,12957,13566]
  matching_ad_data:   {
    billing_id:      128198760384
    minimum_cpm_micros: 30000
    direct_deal:   {
      direct_deal_id: 4468564232346303516
      fixed_cpm_micros: 1000000
      deal_type: "PREFERRED_DEAL"
      publisher_blocks_overridden: true
    }
    direct_deal_id: 44680198125673563 {
      fixed_cpm_micros: 610000,
      deal_type: "PRIVATE_AUCTION"
    }
}
}
publisher_settings_list_id:
[23744444444442486439,28888888065456789,6937689032
477604751]
  slot_visibility: NO_DETECTION
  viewability: 30
  iframing_state: UNKNOWN_IFRAME_STATE
  auto_refresh: {
    refresh_count: 1
    }
  renderer: GOOGLE
  is_amp_page: DIALECT_HTML
  amp_ad_requirement_type:
AMP_AD_ALLOWED_AND_NOT_EARLY_RENDERED
  allowed_ad_types:
[ALLOWED_AD_TYPE_BANNER,ALLOWED_AD_TYPE_VIDEO]
  session_depth: 2

}
response_deadline_ms: 122
is_test: false
}
```

Google ID of this specific person

ID code enabling buyer to re-identify this specific person and tie them to an existing profile

Distinctive information about this specific person's device

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Goolge's "publisher verticals" list.

Distinctive information about this specific person's device

Example OpenRTB bid request 14.

```
{
    "openrtb": {
        "ver": "3.0",
        "domainspec": "adcom",
        "domainver": "1.0",
        "request": {
            ...
            "context": {
                "regs": {
                    "gdpr": 0,
                    "coppa": 0
                },
                "restrictions": {
                    "bcat": [ "IAB24", "IAB25", "IAB26" ],
                    "cattax": 1,
                    "badv": [ "ford.com", "buick.com" ]
                },
                "site": {
                    "id": "1234",
                    "name": "Awesome Example Site",
                    "domain": "examplesitedomain.com",       ── The website this specific person is currently viewing
                    "mobile": 1,
                    "amp": 0,
                    "pub": {
                        "id": "9876",
                        "name": "Example Publisher, Inc.",
                        "domain": "examplepubdomain.com"
                    }
                },
                "user": {
                    "id": "a0af45c77890045deec100acb8443baff57c",     ── Various ID codes that each this specific person, and can tie them to existing profiles
                    "buyeruid": "fcd4282456238256034abcdef220d9aa5892",
                    "yob": 1990,                                        ── Distinctive characteristics of this specific person
                    "gender": "F"
                },
                "device": {
                    "type": 4,
                    "ifa": "8846d6fa10008bceaaf322908dfcb221",     ── Distinctive information about this specific person's device
                    "ip": "1.2.3.4",                               ── This specific person's IP address
                    "ua": "...user agent string...",
                    "make": "Apple",
                    "model": "iPhone",
                    "hwv": "6s",                                   ── Distinctive information about this specific person's device
                    "os": 13,
                    "osv": "11.4.1",
                    "mccmnc": "310-005",
                    "geo": {
                        "type": 1,
                        "lat": 42.3601,                            ── This specific person's GPS coordinates
                        "lon": 71.0581,
                        "country": "USA",
                        "utcoffset": -300
                    }
                }
            }
            ...
        }
    }
}
```