

# Real-time Bidding Click-through Rate Prediction

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iPad

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Jim Wilson/The New York Times

Updated Jan. 27, 2010

The iPad is Apple's new tablet computer.

Steven P. Jobs positioned the iPad as a device that sits between the laptop and the smart phone - and which does certain things better than both of them, like browsing the Web, reading e-books and playing video. There was enormous anticipation leading up to its release on Jan. 27, 2010. Media companies hoped that the device would finally lead to a [viable way for them to charge](#) for news, books and other material.

The iPad's features and specifications, now sharply in focus: The half-inch thi

Content: iPad

## Bits

### Three Reasons Why the iPad WILL Kill Amazon's Kindle

January 27, 2010 7:05pm

### Three Reasons Why the iPad WON'T Kill Amazon's Kindle

January 27, 2010 5:57pm

### David Pogue's First Look at the Apple iPad

January 27, 2010 4:05pm

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### INDUSTRY STANDARD

MARCH 10, 2010

**Mac user groups and iPod accessories**

### SILICON ALLEY INSIDER

MARCH 10, 2010

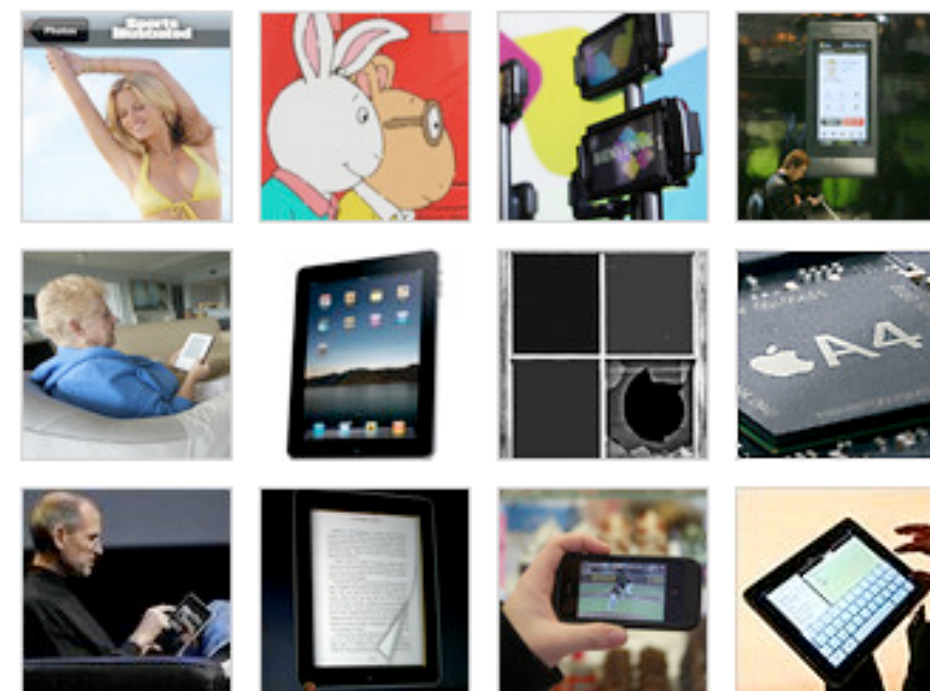
**Bill Gates Loses Forbes' 'World's Richest' Title To Carlos Slim (MSFT, NYT, AMX)**

### GEAR LIVE

MARCH 10, 2010

**Adobe answers Steve Jobs and his thoughts on Flash on iPad and iPhone**

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Ads by Google

what's this?

### BlackBerry® Curve™ 8900

The Thinnest & Lightest Full-QWERTY BlackBerry Smartphone Available.

[www.BlackBerry.com/Curve](http://www.BlackBerry.com/Curve)

### Tablet PC's

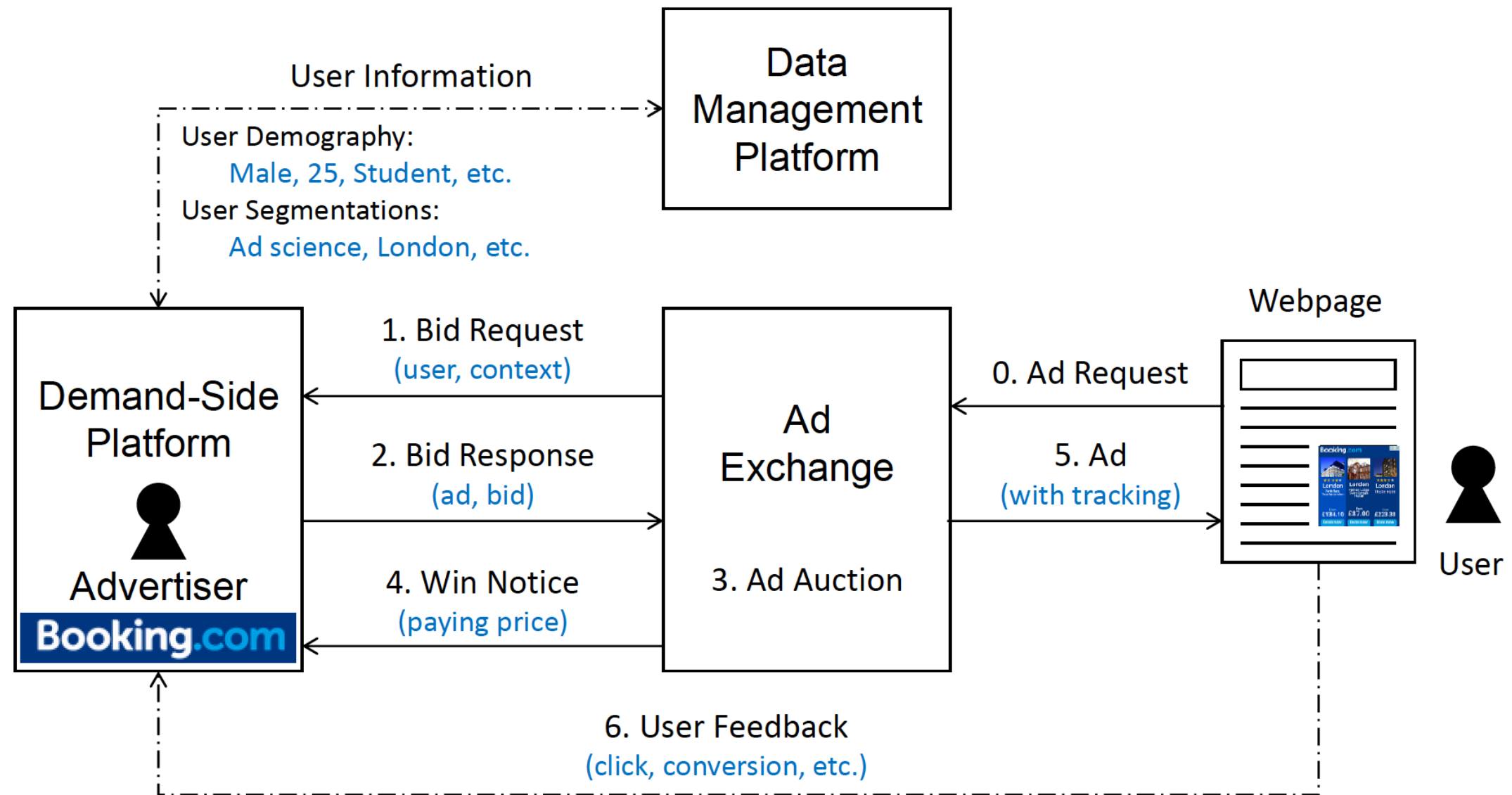
Mobile Tablet PC Solution Devices

[www.camtechsystems.co.uk](http://www.camtechsystems.co.uk)

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Ads: PCs,  
mobile phone

# Real-time Bidding Workflow



# Typical Features Example

Col #	Description	Example
*1	Bid ID	015300008...3f5a4f5121
2	Timestamp	20130218001203638
†3	Log type	1
*4	iPinyou ID	35605620124122340227135
5	User-Agent	Mozilla/5.0 (compatible; \ MSIE 9.0; Windows NT \ 6.1; WOW64; Trident/5.0)
*6	IP	118.81.189.*
7	Region	15
8	City	16
*9	Ad exchange	2
*10	Domain	e80f4ec7...c01cd1a049
*11	URL	hz55b00000...3d6f275121
12	Anonymous URL ID	Null
13	Ad slot ID	2147689_8764813
14	Ad slot width	300
15	Ad slot height	250
16	Ad slot visibility	SecondView
17	Ad slot format	Fixed
*18	Ad slot floor price	0
19	Creative ID	e39e178ffd...1ee56bcd
*20	Bidding price	753
*†21	Paying price	15
*†22	Key page URL	a8be178ffd...1ee56bcd
*23	Advertiser ID	2345
*24	User Tags	123,5678,3456

Optimising from the advertisers' perspective:

- Ads (creative) known
- Historical performance known
- First party audience data available
- Competition unknown



Counting features v.s. Model features  
e.g., 0.12% or 10 million for London  
v.s. 001000000 represents London

# Considered Models

- Logistic Regression based on model features
- Probit Regression based on model features
- Gradient Boosting Regression Tree based on counting features
- Random Forest based on counting features

The programming code would be python and C++.

Thank you