Topic 1 : Basics of Web Analytics

ST2228 WEB AND MOBILE ANALYTICS

Learning Objectives

- Basics of Web Analytics
  - Definition of Web Analytics(WA)
  - Describe the process of Web Analytics
  - Compare the strengths and shortfalls of various web analytics techniques

Web Analytics

The core basics

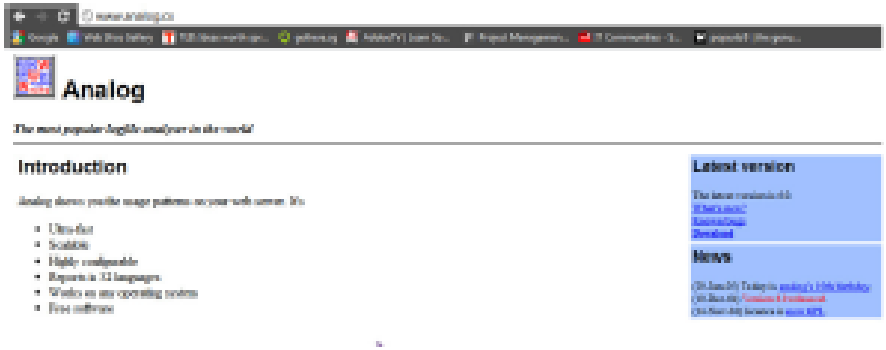
What is Web Analytics?

- Web analytics is the objective tracking, collection, measurement, reporting and analysis of quantitative Internet data to optimize websites and web marketing initiatives Kaushik, A. *Web Analytics – An hour a day*

- Web analytics is the measurement, collection, analysis and reporting of internet data for purposes of understanding and optimizing web usage *Official WAA definition of web analytics*

Brief History

- 1990 – The Birth of the World Wide Web
- 1993 – Log Files, Creation of WebTrends
- 1995 – Creation of Analog (http://www.analog.cx/)



Brief History

- 1996 – Hit Counters
- 1997 – Javascript Tags
- 2004 – The Creation of the Web Analytics Association (WAA)

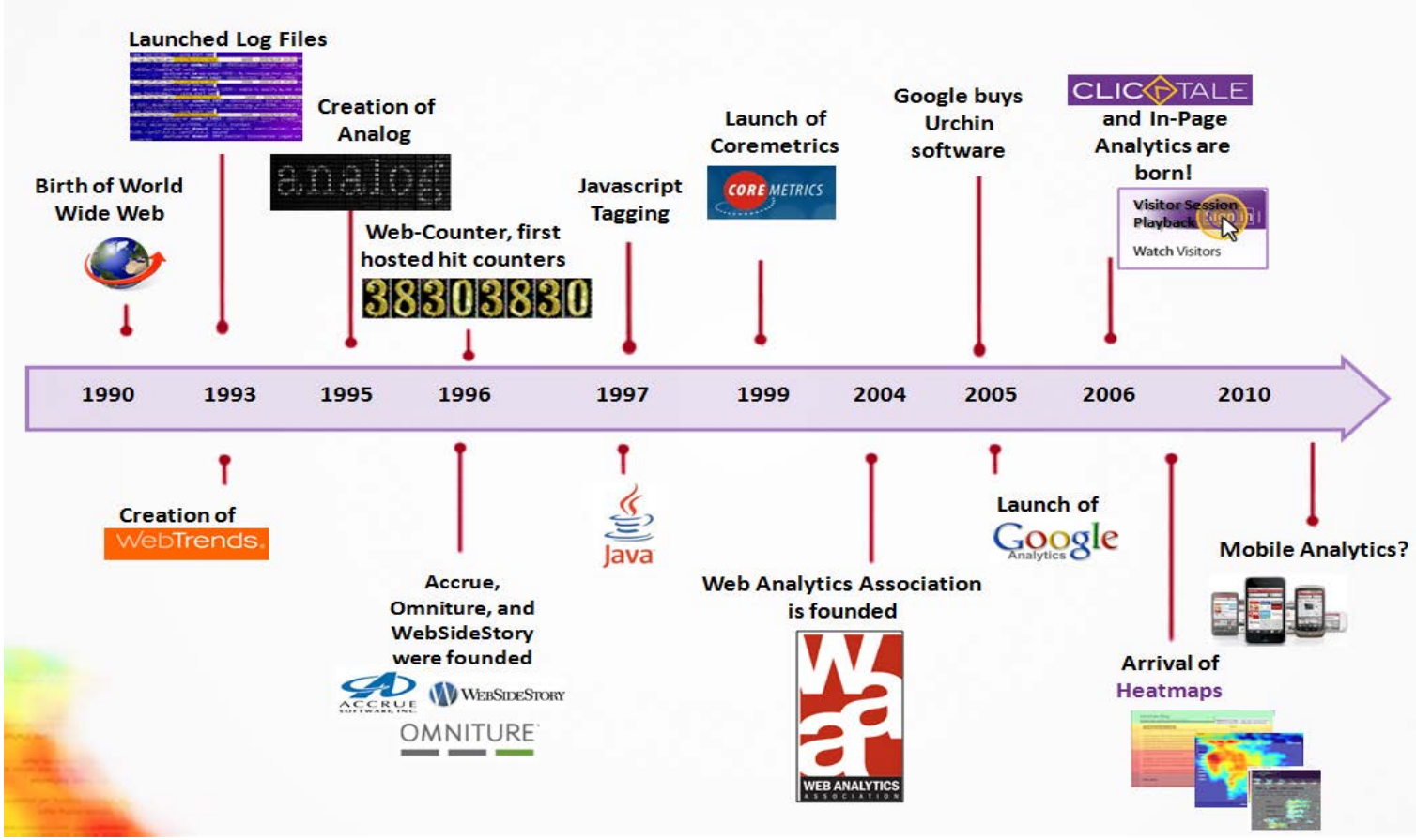
Brief History

- 2004 – The Creation of the Web Analytics Association (WAA)
- 2005 – Google buys Urchin & launches Google Analytics
- 2006 – The birth of In-Page analytics
- Future – Anybody's guess

(Source: http://blog.clicktale.com/2010/11/17/a-brief-history-of-web-analytics/)

ST2315 WMA

Brief History



Source: http://blog.clicktale.com/2010/11/17/a-brief-history-of-web-analytics/

Web Analytics 101

- Is Web Analytics just Clickstream Analysis?
  - A clickstream is the recording of the parts of the screen a computer user clicks on while web browsing.
  - As the user clicks anywhere in the webpage or website, the action is logged on a web browser or inside the web server.
  - A clickstream is a series of page requests and every page requested generates a signal.
  - Clickstream Analysis gives webmasters insight into what visitors on their site are doing.

Web Analytics 101

- Current landscape and Challenges
  - Most people think:
    - Web analytics = clickstream
  - But clickstream is just one part
  - More importantly, frustration is that

"Data is not telling me what I should do"

Web Analytics 101

- Current Landscape and Challenges
  - Problem of many WA vendors and their tools/features.
  - Problem of too much data.

- Google Analytics changed the game, i.e. anybody can use this tool for free for their website.

Google Analytics

What ?

+

Why ?

Fundamentals of WA

- What happened?
  - Data collected (99%)
    - Clicks, Pages, time on site, paths, abandonment rate etc.

We are interested in the "WHY" –

Insight into the mind of our customers.

It is crucial to combine the what(quantitative) and the why(qualitative) together.

Fundamentals of WA

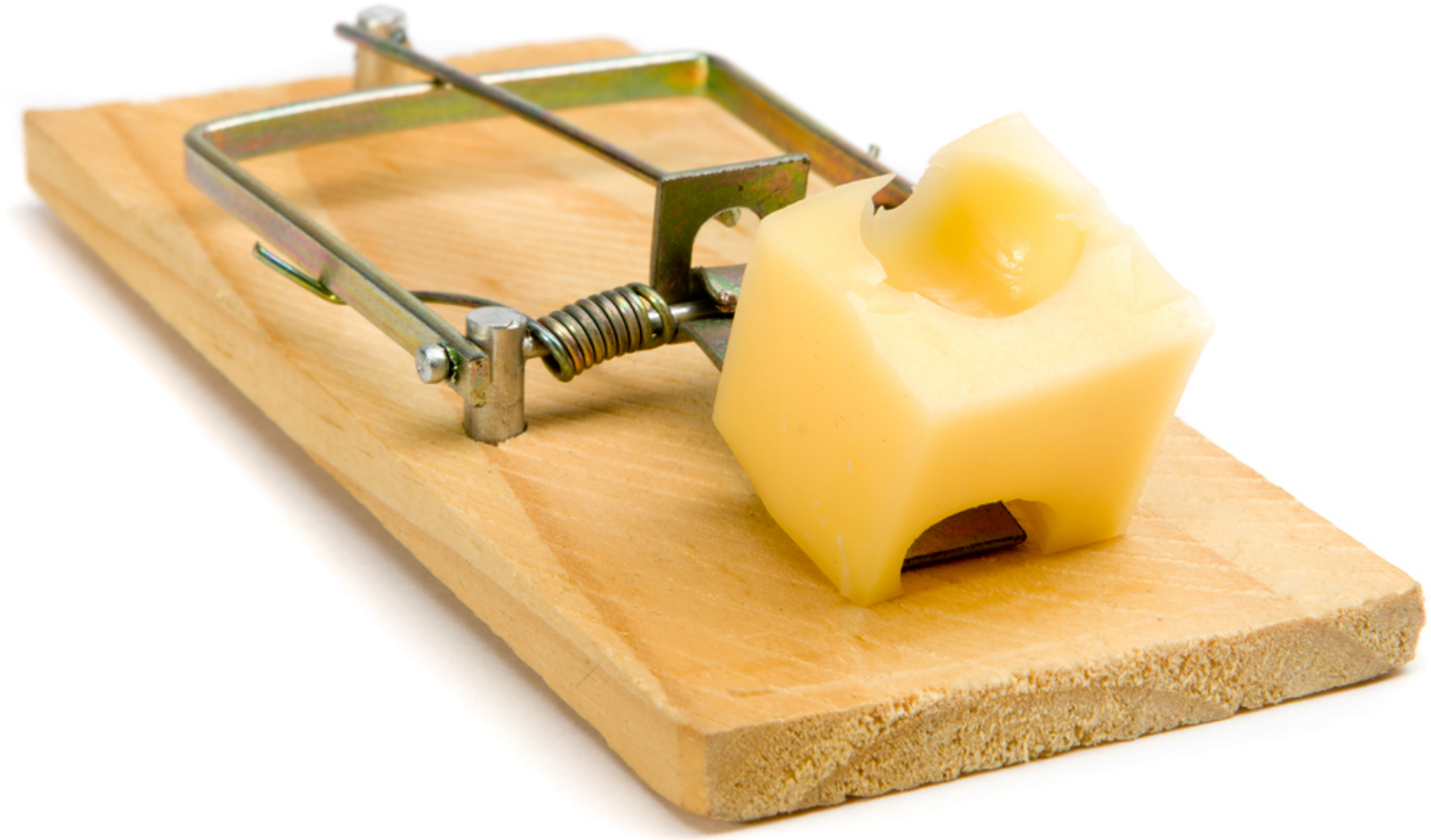
Qualitative data includes:

- Brand buzz and opinion tracking
- Customer satisfaction
- Net promoter indices
- Open-ended voice-of customer analysis
- Visitor engagement
- Stickiness
- Blog-pulse

Clickstream

HOW TO CAPTURE THE CLICKSTREAM DATA?

How to capture the clickstream Data?



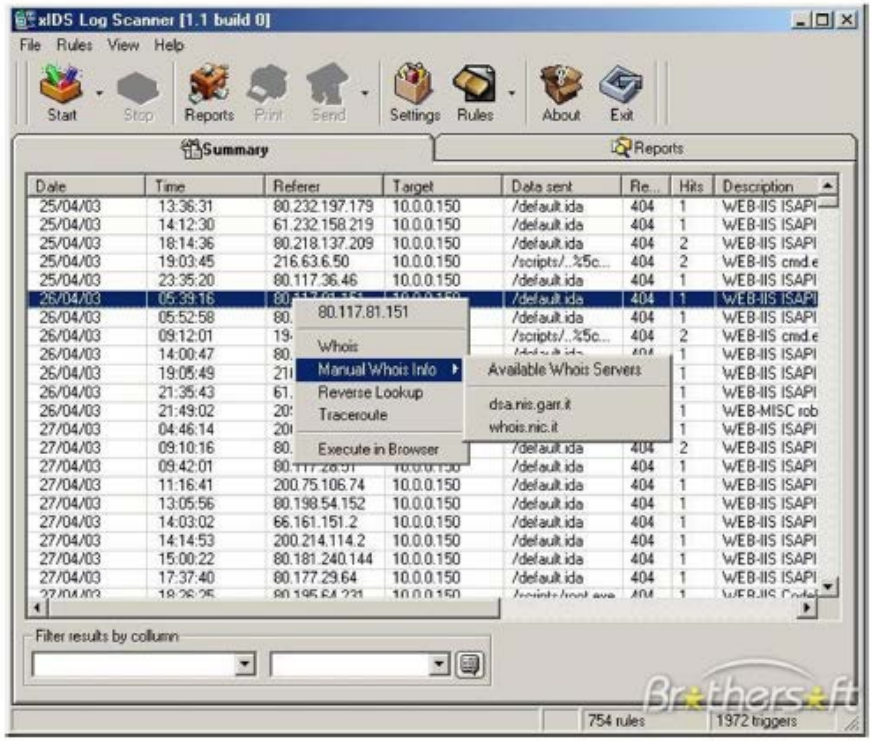
Data Capturing

Capturing data: Web Logs or JavaScript Tags?

- Web Log : Originally developed to capture errors generated by web servers and over time have been “enhanced” to capture more data as analytical needs shifted from technical to marketing

Data Capturing

Web Log



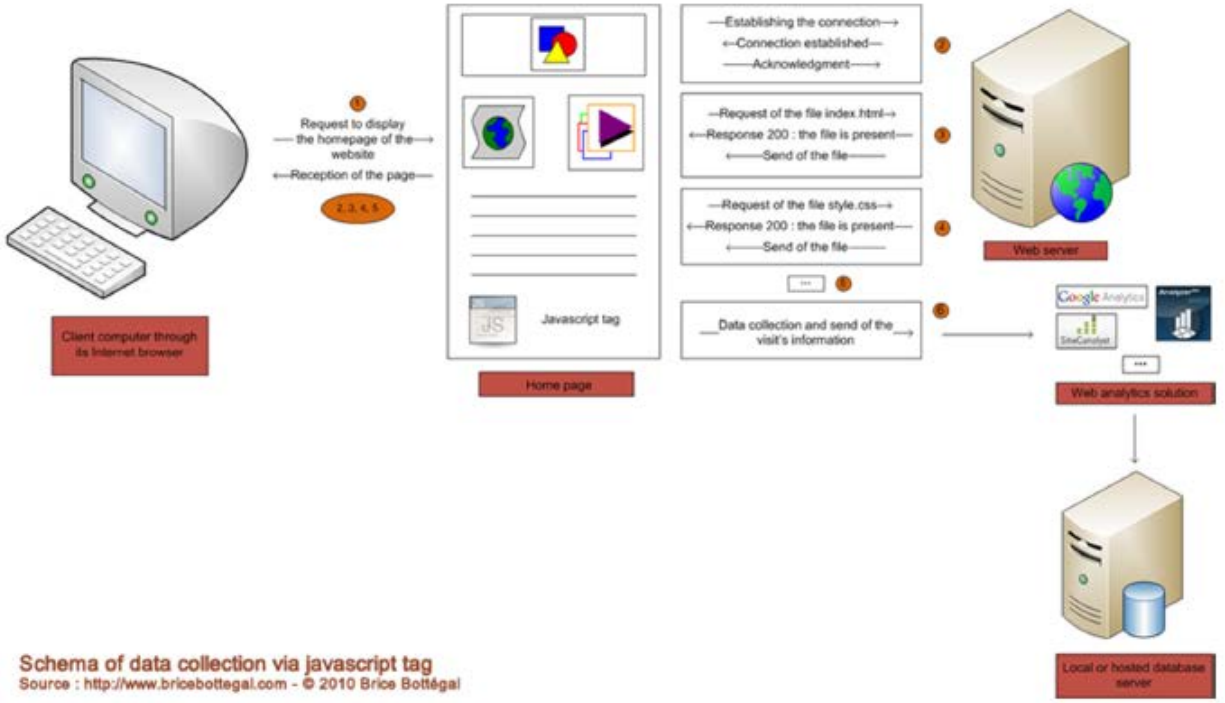
Data Capturing

Capturing data: Web Logs or JavaScript Tags?

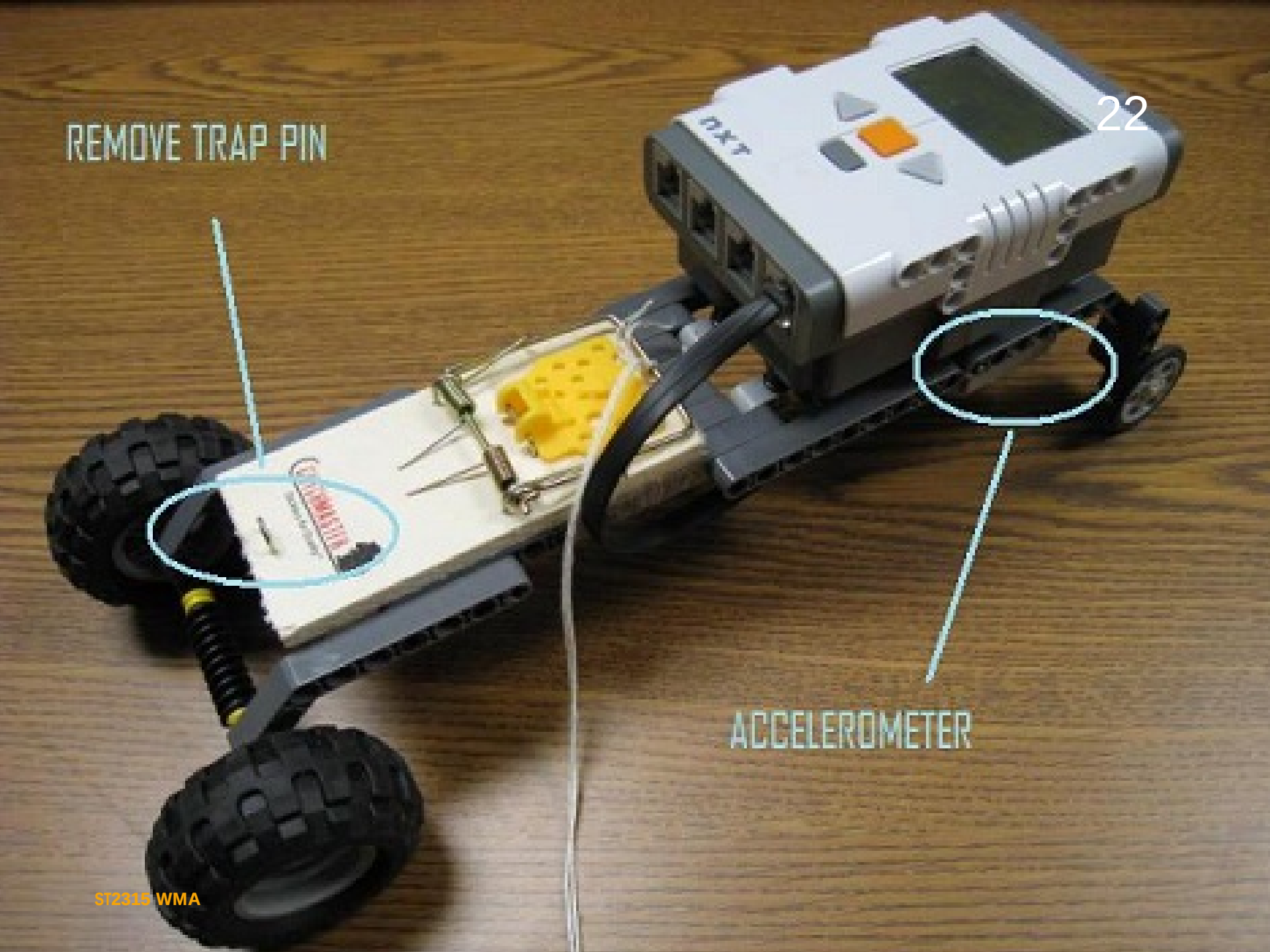
- JavaScript Tags : Using JavaScript, sites can send HTTP requests behind the scenes and customize or update certain sections of the site, tailored to a particular user's needs. This does away with complete page refreshes and makes the user interface a lot more powerful and user friendly.

Data Capturing

JavaScript Tag



Schema of data collection via javascript tag
Source : http://www.bricebottegal.com - © 2010 Brice Bottégal


REMOVE TRAP PIN
ACCELEROMETER

Data Capturing: Comparison of methods

Reasons for JavaScript Tags over Web Logs:

1. Separating data serving and data capture
2. Types and Size of Data
3. Innovation
4. Integration

Data Capturing

1. Separating data serving and data capture
   - With Data Logs, data serving and data capture are tied together ➔ dependency on IT team to extract info
   - With JavaScript tags, separation is clear. Analytics team can independently "capture data" while the IT team can "serve pages" ➔ analysis can be done quicker and more cleanly

Data Capturing

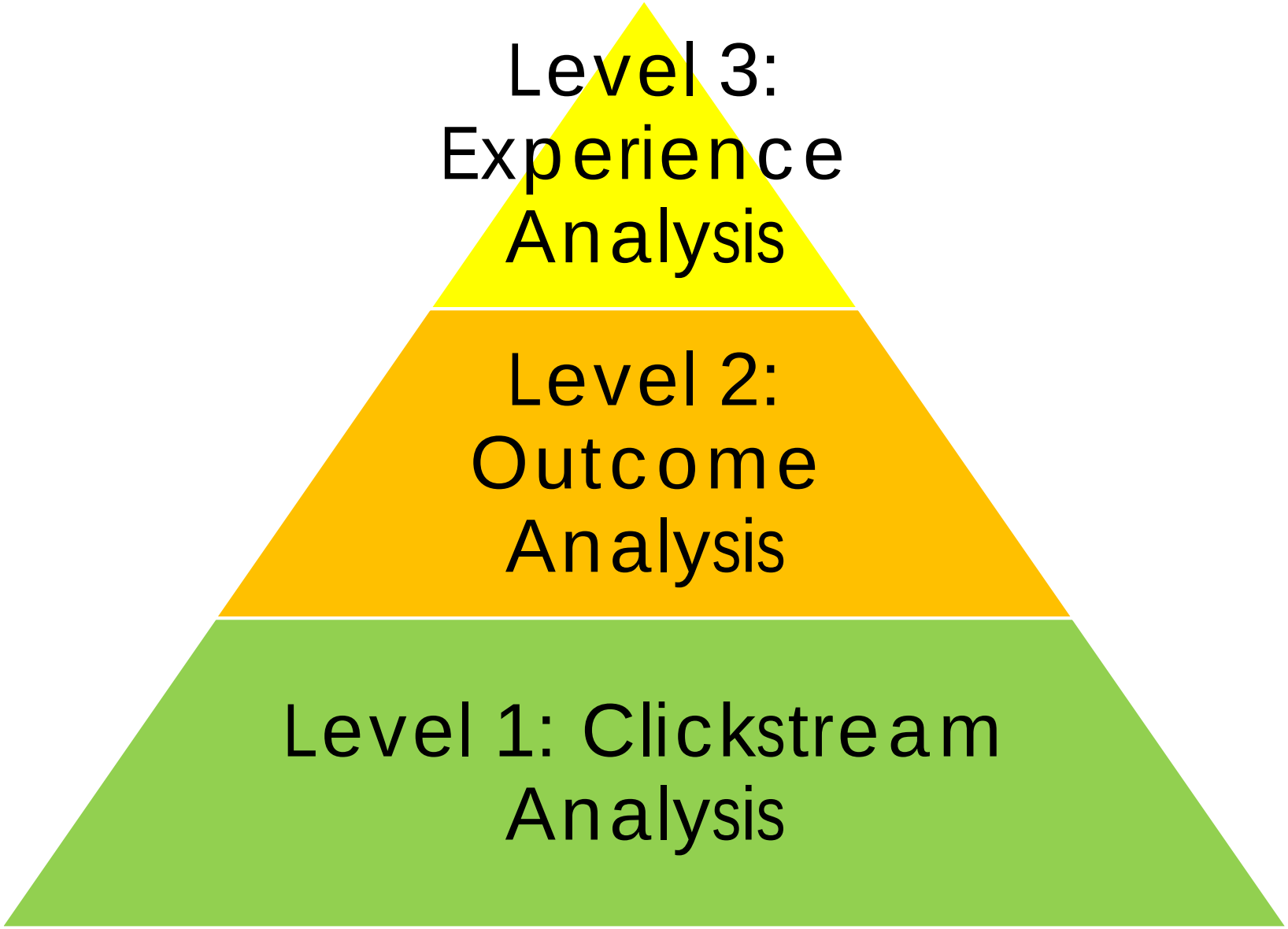
2. Types and Size of Data

- Data Logs originally meant to collect server activity. NOT business data. But they evolved to meet the needs of business decision makers ➔ Over time, huge amounts of data was collected
- JavaScript tags were developed to collect clickstream data for business analysts ➔ More focused and only necessary data is collected

Data Capturing: Comparison

3. Innovation
   - Most vendors are moving away from supporting web logs. Most only offer JavaScript tag versions ➔ Companies have to move with the times to rely on expertise out there
4. Integration
   - There is a move towards an integration of add-ons to the standard clickstream data to provide an end-to-end view of customer behavior
   - Integration is made easier with JavaScript tags compared to Web Logs

We can look at web analytics at different levels


Level 3:
Experience
Analysis
Level 2:
Outcome
Analysis
Level 1: Clickstream
Analysis

Fundamentals of WA

- 1. Clickstream Analysis
  - **Goal**: Infer the intent of our customers or website visitors based on all that we know about them
  - After collection of clickstream data → Analysis

Fundamentals of WA

- 2. Outcome Analysis
  - Commonly known as the ***so what*** element
  - The answer to: **"So what happened, what was the outcome?"**

Fundamentals of WA

- 2. Outcome Analysis
  - Measures how well the website is doing in meeting the goal of its existence
  - Measures the revenue and conversion rates (for e-commerce websites)
  - Also measures the problem resolution and timeliness (for support websites)

Fundamentals of WA

- 3. Experience Analysis
  - Why?
  - Probably the most critical
  - Allows companies to get into the heads of customers and gain insight about why they do the things they do

Fundamentals of WA

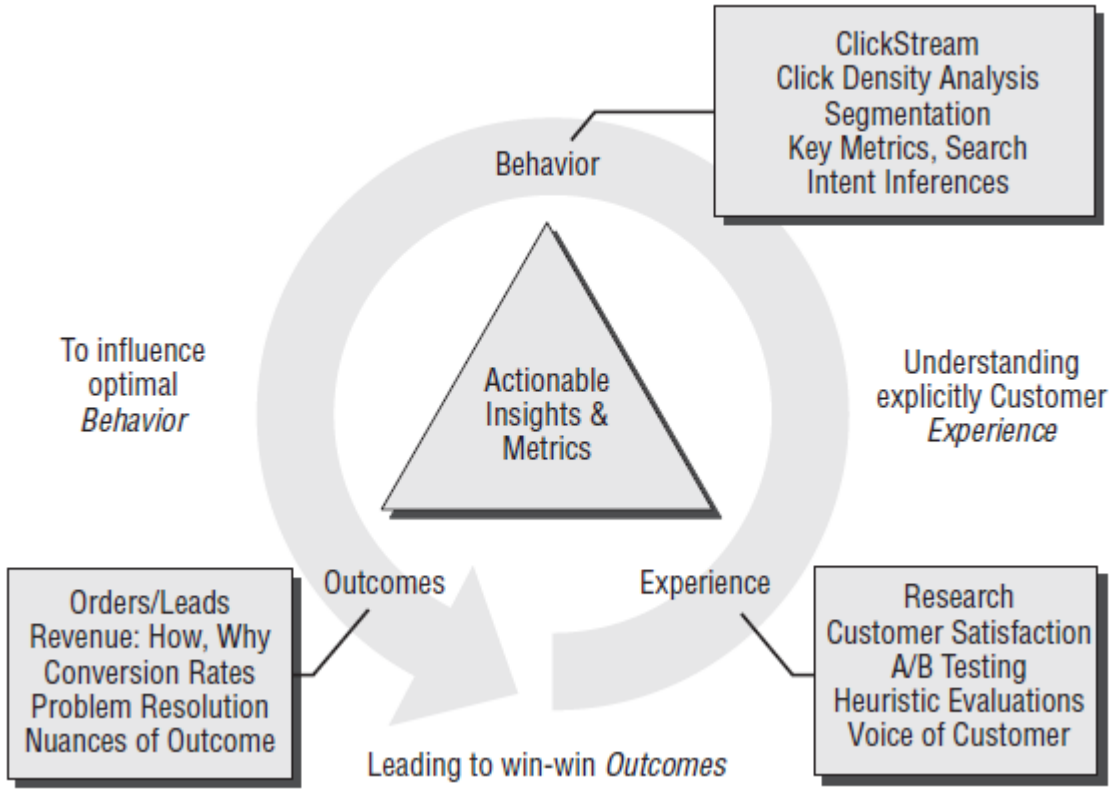
- 3. Experience Analysis

  Different methodologies:

  - Surveys
  - Experimentation and testing
  - A/B testing or multivariate testing
  - User-centric design testing e.g. heuristic evaluations
  - Lab usability testing
  - Site visits

Viewed as a 3 cornered Cycle

Trinity Strategy



Adapted from Web Analytics by Avinash Kaushik