Value Creation from Big Data

Kepeng Li, Huawei, likepeng@huawei.com

Public Information

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What is Big Data ?

"Big data usually includes data sets with sizes beyond the ability of commonly-used software tools to capture, curate, manage, and process the data within a tolerable elapsed time"--*wikipedia*

Volume: Big Size

•Centralized storage & computing has been unable to deal with the huge amount of data

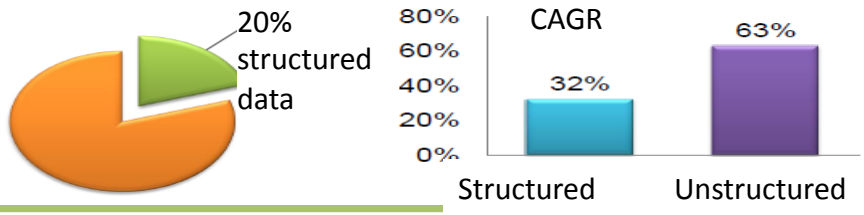
9.5M rec/day

25TB log/day

168TB video/day

Variety: Diversified data Sources & types

•Text/Pic./Video/Doc.etc



Velocity: Highly Requirement of Timeliness

•Timely and effective analysis of massive data

eCommerse
Response in real-time to realize ordering

Social Network
Analyze rapidly to realize precise marketing

Mobile Advertising
Response to realize precise advertising in time

M2M
Monitor and predict abnormal events e.g. predict earthquake will occur in 10 minutes

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Carriers have more valuable big data than internet companies

BSS Data

- Customer profile
- Product subscription
- Customer service
- Campaign touch
- CDR, Bill
- Terminal
- MSISDN

Internet Data

- Webpage browsing
- Keyword searching
- Webpage content

BIG DATA

Network Data

- PS/CS probe and DPI
- Radio network probe
- NME/EMS data
- User internet access logs
- RGS

VAS Data

- VAS subscription
- VAS usage
- VAS download
- VAS product
- VAS content

The value of the big data gives to carriers

Improve business efficiency

- Pipeline visualization
- Self-analysis

Efficient technology, low cost

- massively parallel computing models
- new technologies

Improve customer experience

- Differentiated competition Advantage
- Differentiated sale
- Improve traffic value
- Improve product loyalty
- Reduce customer cost

Enhance the management level

- Real-time monitoring and warning
- Traffic, user development forecast
- The audience forecast of package design
- Real-time decision based on predictive options

Innovative business model

-Data openness
-Future forecasting

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Real-time Campaign

Aimed at available events with details, promote the product and service to the customers in time by real-time trigger to meet customers' requirement.

Customer Event Management

Network-use event

Events based on signals and basic usage of network
Include: Power on/off, call, location-change, roam, network-experience, files-download and etc.

Service-process event

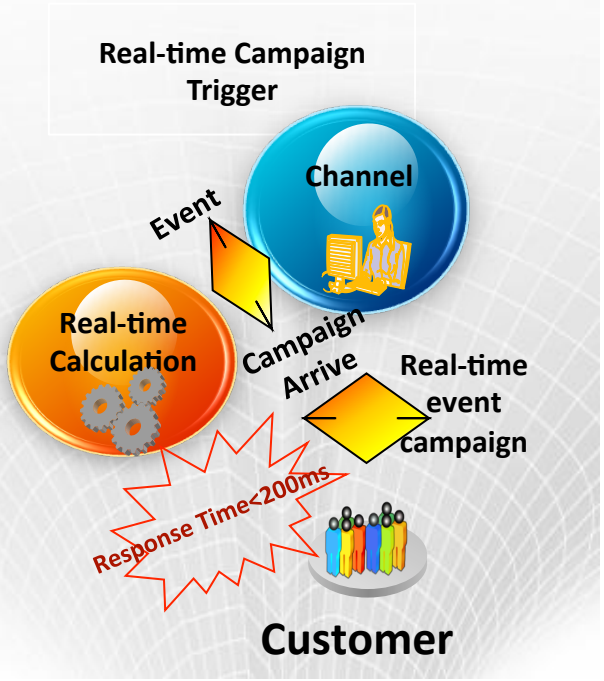
Events based on service-process, complaint, consulting and active-service of BSS system.
Include: Service-process, visit online operation hall, visit SMS operation hall, query, state-change and etc.

Service-use event

Event based on mobile network usage
Include: Mobile reading, mobile animation, web-site visit, video viewing, online shopping and etc.

Lifecycle-change event

Event based on customers' lifecycle-change。
Include: Customer care, contract maturity, customer retention and etc.



Personalized Promotion

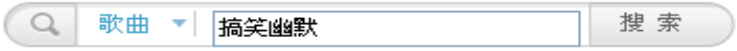
According to the info from unified view of customer including event details and marketing solution, personalized service or product is promoted to the customer through all kinds of channels based on the co-schedule principle.

Unified view of customer, Behavior information

Calling, downloading & ordering history

歌曲名	歌手名	价格	有效期
忘忘	龚琳娜	2.0元	2012-11-09 00...
柴米油盐酱醋茶	王力宏	2.0元	2011-12-14 00...
会呼吸的痛	梁静茹	2.0元	2011-10-15 00...
传奇	李健	2.0元	2011-10-28 00...

Searching & browsing history



Marketing solution & targeted customer list

Co-manage of rules
- Co-define of channel
- Rule-setting of co-interact
- Rule-setting of co-distribute
- Rule-setting of co-schedule
- List of sensitive customer

Co- schedule of channels
- Co-distribute of channels
- Co- schedule of channels
- Co- monitor of channels

Scheduled Task

- List A → Business Hall
- List B → Online business website
- List C → Account manager campaign
- List D → SMS, MMS, WAP Batch Campaign
- List E → IVR, Manual call
- List F → Paper Bill

Social Media Analysis

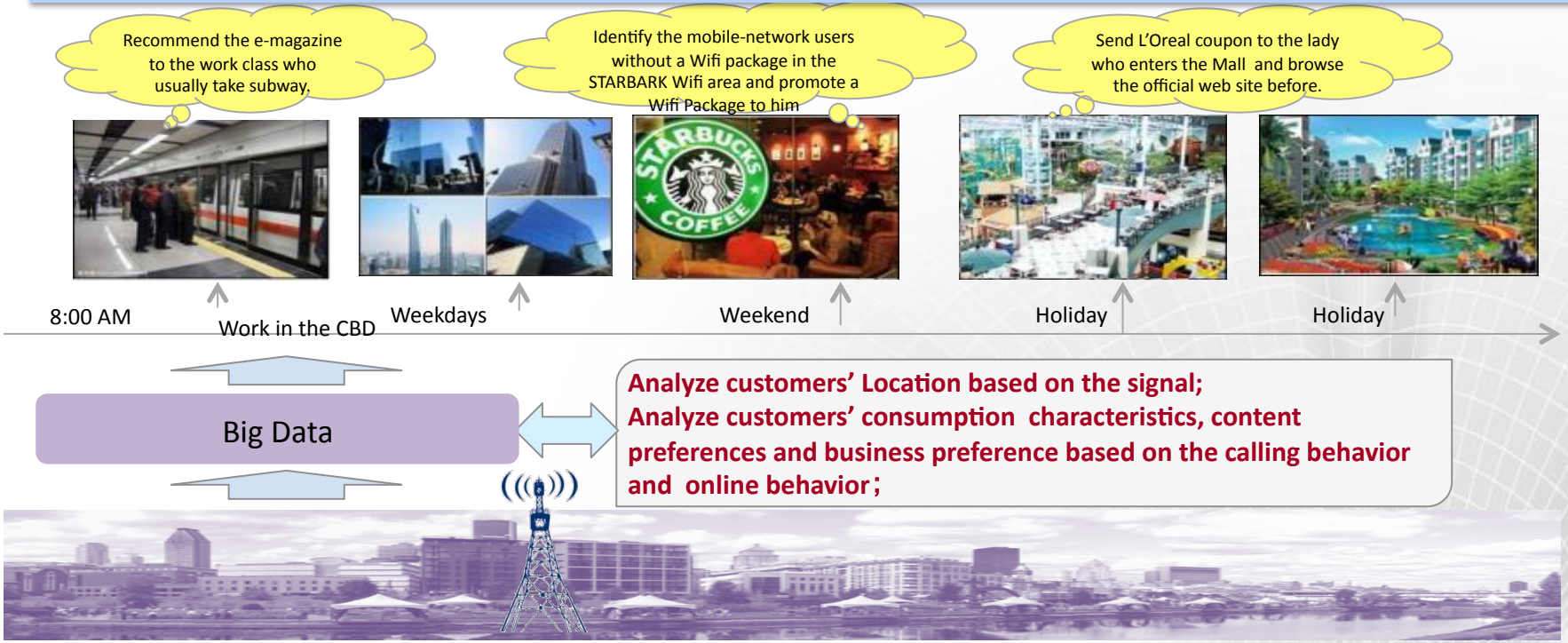
With the increasing influence of social media, especially the core people, social media analysis can strengthen the in-depth service of customer segment and enhance the campaign capability.

Market-related Opportunity: Micro-blog Promotion

Detailed customer segments in the social domain are analyzed. Based on the big data, many functional topics are formed. For example, common users' social behavior such as comment, rank, new note, vote and blog, micro-blog users' "concern", "mutual concern", "mutual circle" will be solidified to a model-analyze template and help to output highly-matched social base of the marketing activities and the tariff package design.

Precise Advertising

Based on the user behavior, event information and the requirement of advertisers, push personalized and precise advertising to the end-users to achieve win-win cooperation.



Data Openness

The calculation & analysis capability and the corresponding customer information of the big data can be opened to 3rd partners in the form of online analysis, report or API.

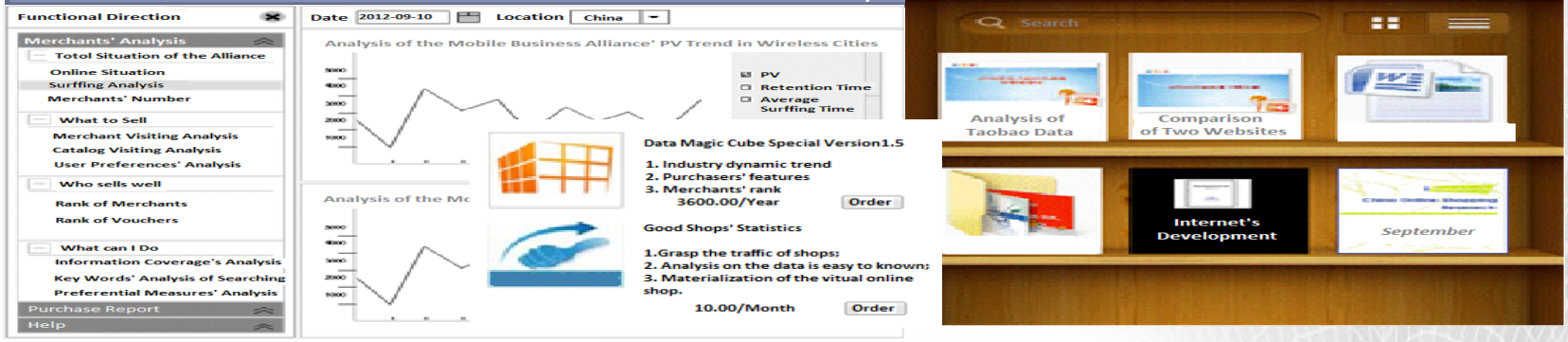
Local TV, Radio, Newspapers

Local & Global Media & Publishers

Local & Global Advertisers

Online Analysis | Analysis Report Generation

Semantic Analysis



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TMF Big Data Analytics Project

➢Time Schedule:

-Feb, 2013 ~ Oct, 2013

➢Target Areas:

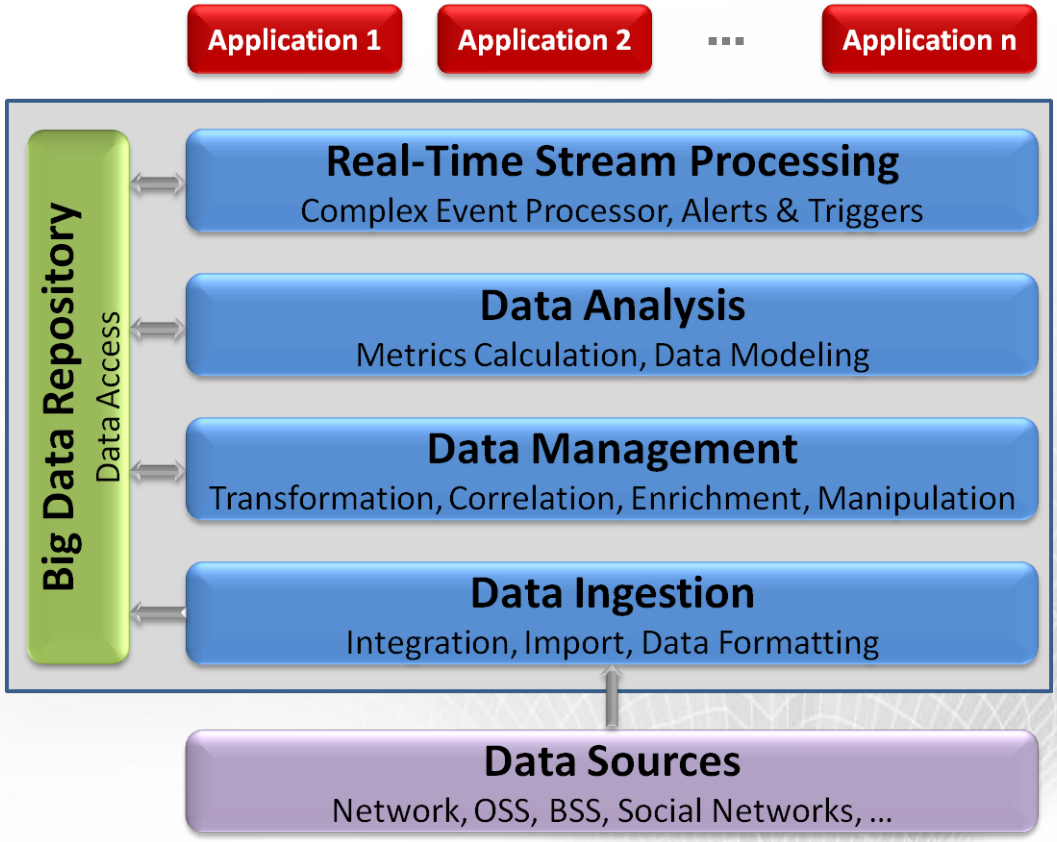
-Big Data Analytics Reference Model
-Big Data Analytics Best Practices
-Big Data Analytics Technologies
-Big Data Analytics Business Metrics

➢Link:

http://www.tmforum.org/community/projects/13frameworxbigdataanalytics/default.aspx

➢Participants:

- Orange, Verizon,
- Ericsson, Huawei, Amdocs, Comverse, ALU, NEC
- IBM, Oracle, HP
- … …



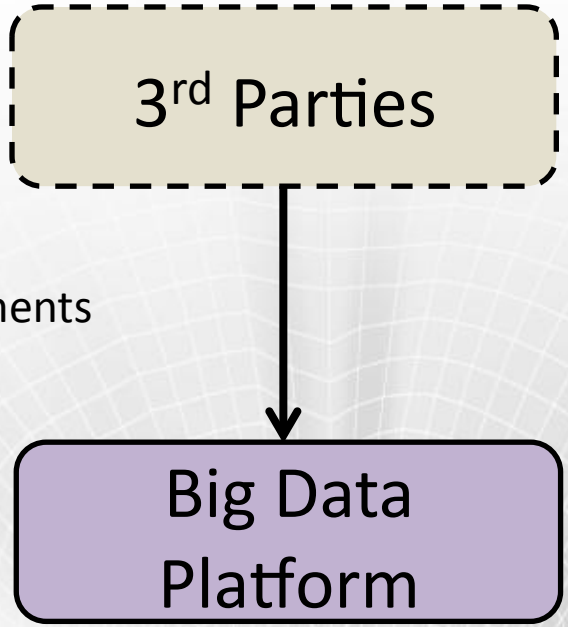
OMA Standard Considerations

➢ Possible Target Areas:

- Network API: expose data to 3rd parties

➢ Possible Features:

- Data Model:
  - -identifying roles and actors
  - -identifying existing different types of data and related elements
  - -defining a common framework of data model
  - -defining how additional (new) data to be extended
- Data Access Mechanism: (Search, Retrieval)
  - - access authentication mechanisms
  - - consistent, unified and efficient data access
  - - controlled, secure access by authorised entities
  - - charging information support



Thank you!