SNA기반의 Social Networks

이 현 정

2009. 10. 15
The future of social networks: Social networks will be like air by Charlene Li
1. Social Networking

Social Network

Node

Social relationship

Link

Love, friends, alliance, trade, collaboration, ...

People, object, organization, country, department, ...

Social Networking

action

inter-action

a network of people that exists

Social Network Analysis

How?
Social Network Analysis
“사회연결망분석”

Targeting Technology

User Profile/Transaction data
available in almost every industry

Core Customer
Customer Segmentation

SNA Engine
(=Link Data Mining)

Traditional Data Mining Engine
(=Node Data Mining)

User-to-User Relationship data
available in only selected industries (telecom, internet, SNS . . .)
Simple Examples: Evaluating Customer Value

<table>
<thead>
<tr>
<th></th>
<th>Purchase Value (P)</th>
<th>Rank</th>
<th>Referral Value(Q)</th>
<th>Rank</th>
<th>Total (P+Q)</th>
<th>Total Rank</th>
</tr>
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<td>Tom</td>
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</tbody>
</table>
2. 소셜 네트워크 분석

Source: Gartner HypeCycle for Social Software, 2008
3. 소셜 네트워크의 유형

- 키워드 네트워크
- 공저 네트워크
- 인용 네트워크
- 공동연구 네트워크

Social

- 통화 네트워크
- 상호작용 네트워크
- 지식 네트워크

Business

- 고객 네트워크
- 조직 네트워크
- 기업가 네트워크
- 범죄 네트워크

WWW

- 전력선 네트워크
- 바이러스 확산 네트워크
- 전염 네트워크

Technological

- 단백질 상호작용 네트워크
- 대사 네트워크
- 생명체 네트워크

Biologic

etc

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4. SNA기반의 지식경영활동

4. SNA기반의 지식경영활동

“암묵지의 사회화 추진과 외부화를 활성화하기 위한 Target Point 발견”

- 업무분야별 전문가 발굴
- 지식전문가 양성을 위한 교육 기회 확대
- 전문가의 퇴직, 이직, 인사이동 등으로 인한 지식의 유실을 사전에 예방 가능
- 지식흐름의 병목지점을 확인하고 조직차원의 개입 가능
4. SNA기반의 지식경영활동

Examples

▲ A 사회조업
▲ B 社 의료업
▲ C 社 석유정제업

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5. SNA기반 Telecom. Industry

Social Network Analysis

Social Targeting
- 고객의 역할과 관심 추론
  - 역할에 기반한 targeting (허브, 중개자, ...)
  - 고객들간 유사관심에 근거한 응집그룹 분석
  - 시장 세분화에 활용
  - Viral 마케팅의 디자인

Social CRM
- 고객들의 네트워크 가치 측정
  - 고객 이탈 예측
  - 영향력 있는 고객들의 유지
  - Cross-selling/up-selling
  - 새로운 고객 획득

“Pin-point Targeting”

“Customer Network Management”

Social Ties and their Relevance to Churn in Mobile Telecom Networks
2008 IBM India Research Lab
5. SNA기반의 Telecom. Industry

Examples

Step 1. Multi-way Multi-level Graph Partitioning
5. SNA기반의 Telecom. Industry

Step 2. Community Analysis

- Extract cohesive communities from the separated network
- Produce individual index of influence scoring
5. SNA 기반의 Telecom. Industry

- Step 3. Social Group Detection
  - Extract cohesive group
  - Detection social role

[Image of social network analysis with highlights on coordinator roles]
6. SNA기반의 Social Media Industry
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History of Social Media

Global

Korea

Connection

Communication

Blog

Social Media Portal

SNS

Connection

Communication

Blog

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6. SNA 기반의 Social Media Industry

- **Community**
  - Sell service & product
    - Cyworld
    - Myspace
    - Facebook
  - Advertising
    - Hypertargeting
    - Beacon

- **Biz. Model**
  - Result of Service: Ads Fee, User’s Information, Put up Ads
  - Free using the service: Premium Service
  - Service substitute: Service subscription
  - Network Information: Social Ads, Social Media.com, Facebook Application

- **Informediary**
  - Sell information of users
    - Facebook: Social Ads
    - Myspace: Upgrade account
    - Livejournal: Paid account

- **Subscription**
  - Sell service to users

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6. SNA기반의 Social Media Industry

But,
How to manage fragmented social network?
How to measure social influence of customers?
6. SNA 기반의 Social Media Industry

- Portal A
- Video sharing B
- Microblog C
- Social Networking D

Fragmented Networks $\rightarrow$ a Unified Network
Unconsolidated Network $\rightarrow$ Identified Network
Unsynchronized Networks $\rightarrow$ a Unified Network

a Unified Network
6. SNA기반의 Social Media Industry

- Text, Photo, Video, Music...
- Contents
- Activity
- User Value
- Identity/Profile
- Cooperation
- Collaboration
- Relationship Setting
- Interaction

- “Collective Intelligence”
- “Business Intelligence”

- SNA Engine (=Link Data Mining)
- Traditional Data Mining Engine (=Node Data Mining)
- Database of Log Data

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6. SNA기반의 Social Media Industry

Kaboodle “Social Shopping”

Facebook “Social Ads”

- Maya Baratz added the application Movie Clique.
  One month free trial. Try Blockbuster Total Access free for one month: no due dates or late fees on online rentals.

- Dawn Wee Tan added a profile to her queue on Blockbuster.
  Stray
  Have Strays delivered to your door. Check out Blockbuster by Mail for only $3.99/month.

User’s Action (in Facebook)
- Feeds User’s Action to Friends
- Attach Ads Related User’s Activity on News Feed
- Showing Ads with Friends Name, Photo, & Story
6. SNA 기반의 Social Media Industry

“SocialMedia.com”

- Define advertisers’ marketing messages shared between friends
- Find Brand advocates who are willing to voice advertisers’ message
- Capture messages and deliver them to their friends using Friend Rank tech.
- Get paid when word of mouth is delivered

“Sysomos”

- Monitor conversations in blogs, social Networks, forums, etc.
- Access in-depth metrics to track campaigns, brands and products
- Gather insight and shape business strategies
- Identify and engage with key influencers and manage relationships

Inside Sysomos’ Technology
4 Key Steps of Sysomos’ Methodology

1. Data Collection
   Conversations happening within social and traditional media are continuously collected and cleaned of spam.

2. Information Processing
   Proprietary language processing and text analytics technology is applied to extract insights and intelligence.

3. Data Analysis
   Metrics and comparative trends focused on buzz, sentiment and geo-demographics are calculated.

4. You
   Collected insights and metrics are delivered via user-friendly and intuitive online dashboards.
사이람은 소셜 네트워크에 기반하여 개체들간의 관계에 숨겨져 있는 파급력을 정확하게 평가하여, 타겟을 정밀 조준할 수 있도록 지원합니다

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“Cyram NetMiner는 현재 전세계적으로 가장 우수한 SNA용 패키지 소프트웨어로 평가받고 있습니다.”
Products

- Social Network Analysis Package Software
- SNA Engine for Large Network & Practical Applications
- Network Visualization Solution
- Link Analysis Software for Investigation
SNA is a Key to Open the SN World.