

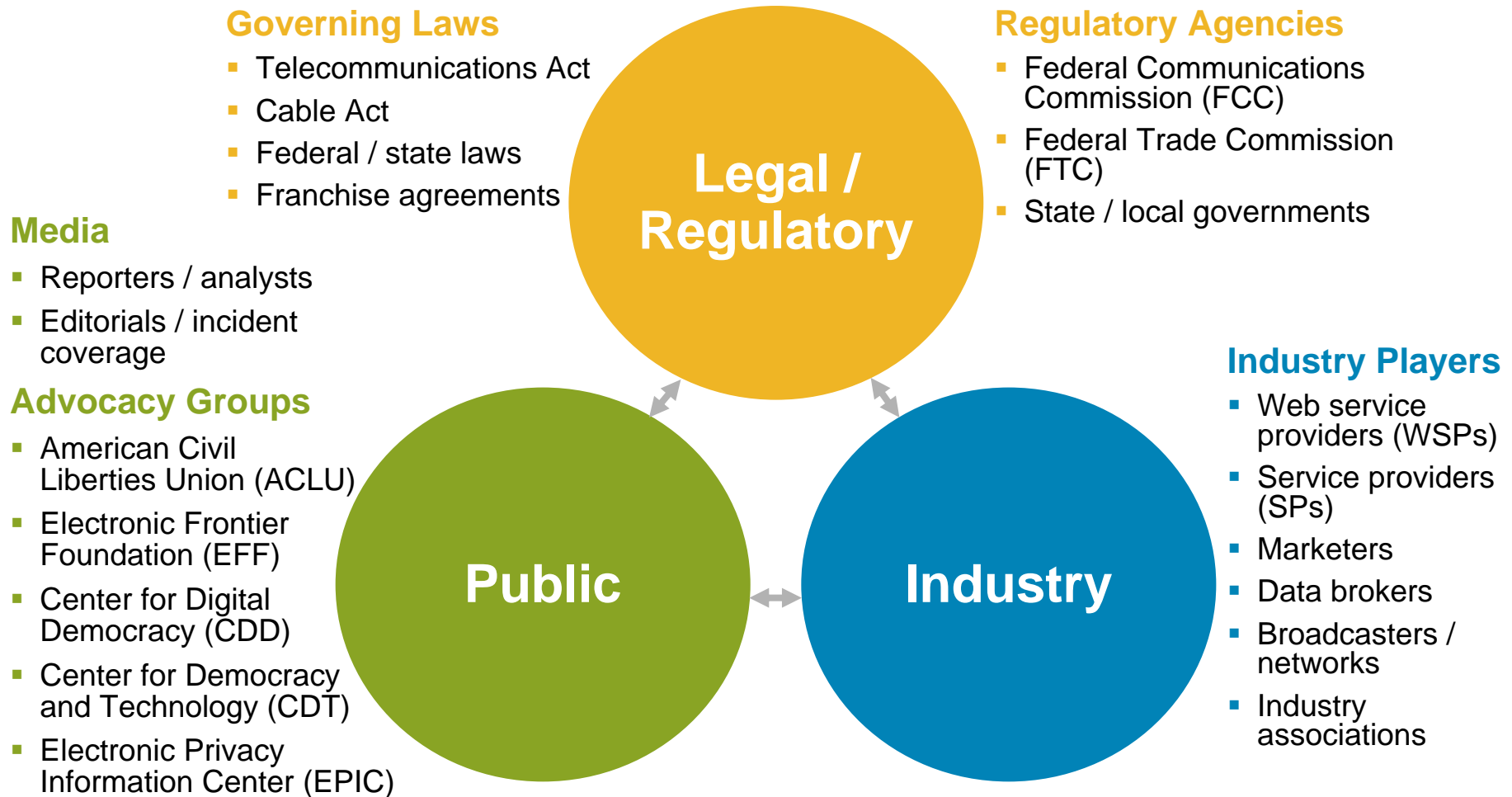


Connected Life Market Watch

Overcoming Privacy Concerns To Profit from Advanced Advertising

Cisco Internet Business Solutions Group (IBSG)
June 2010

Three Constituencies Exert Influence on Future of Advertising and Privacy



Source: Cisco IBSG, 2010

Regulatory and Industry Positioning: Self-Regulation Is Dominant Theme

Federal Trade Commission (FTC)



- FTC proposes governing principles for behavioral advertising (Nov. 2007, Feb. 2009)
- Transparency / consumer control
- Reasonable security / limited data retention
- Affirmative express consent

Service Providers (United States)



- Three of four largest U.S. SPs pledge to follow voluntary code of conduct (Sept. 2008)
- Prefer opt-in framework for all behavioral advertising
- Prefer self-regulation over new laws

Advertising Associations



- Four key advertising associations develop self-regulatory principles (Jan. 2009)
- Work together for enhanced self-regulatory principles for online behavioral advertising
- Address privacy concerns / increase customer trust
- Take responsibility to ensure privacy

Sources: Federal Trade Commission, 2007, 2009; AT&T, Time Warner, Verizon, 2008; American Association of Advertising Agencies (AAAA), Association of National Advertisers (ANA), Better Business Bureau (BBB), Direct Marketing Association (DMA), Interactive Advertising Bureau (IAB), 2009; Cisco IBSG, 2010

Public Opinion: Concerns and Misperceptions Abound

Internet Privacy Survey



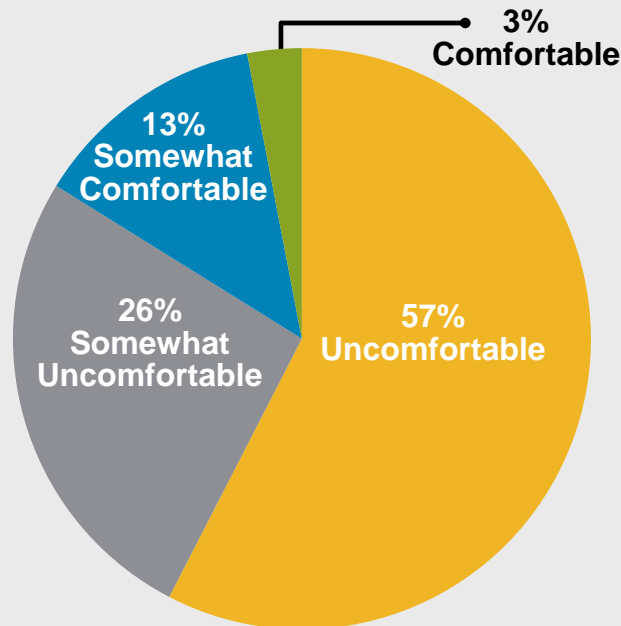
Source: Consumer Reports National Research Center, 2008

Public Opinion: Some People Are Willing To Share Personal Data

- Nearly 40% of consumers indicate some willingness to share information
- People between 25 and 29 are most likely to share location information
- People younger than 24 are most comfortable sharing behavioral information

Data-Sharing Receptivity

Are you comfortable letting your SP use personal information to tailor advertisements to you?

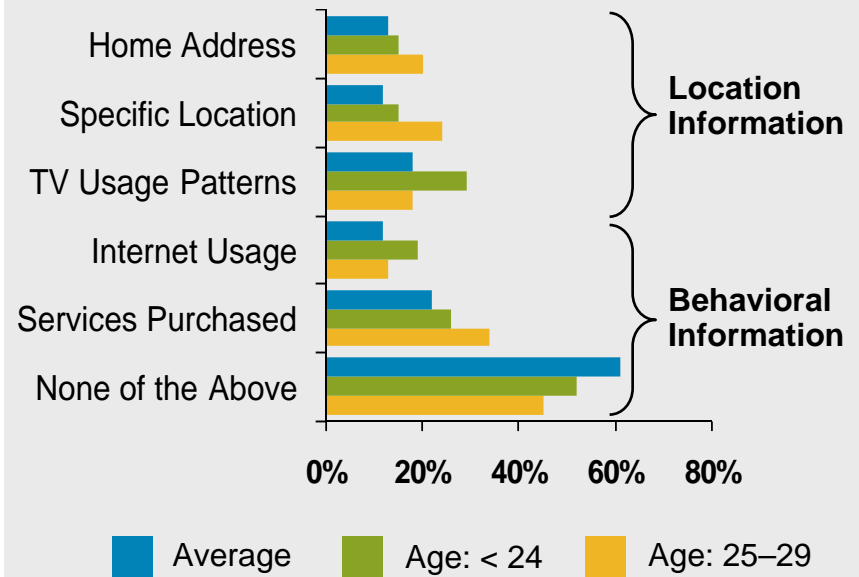


Base: U.S. Broadband Consumers

Source: Cisco IBSG Connected Life Market Watch, 2009

Information Shared Online

What data are you comfortable letting your SP use to deliver targeted advertisements?



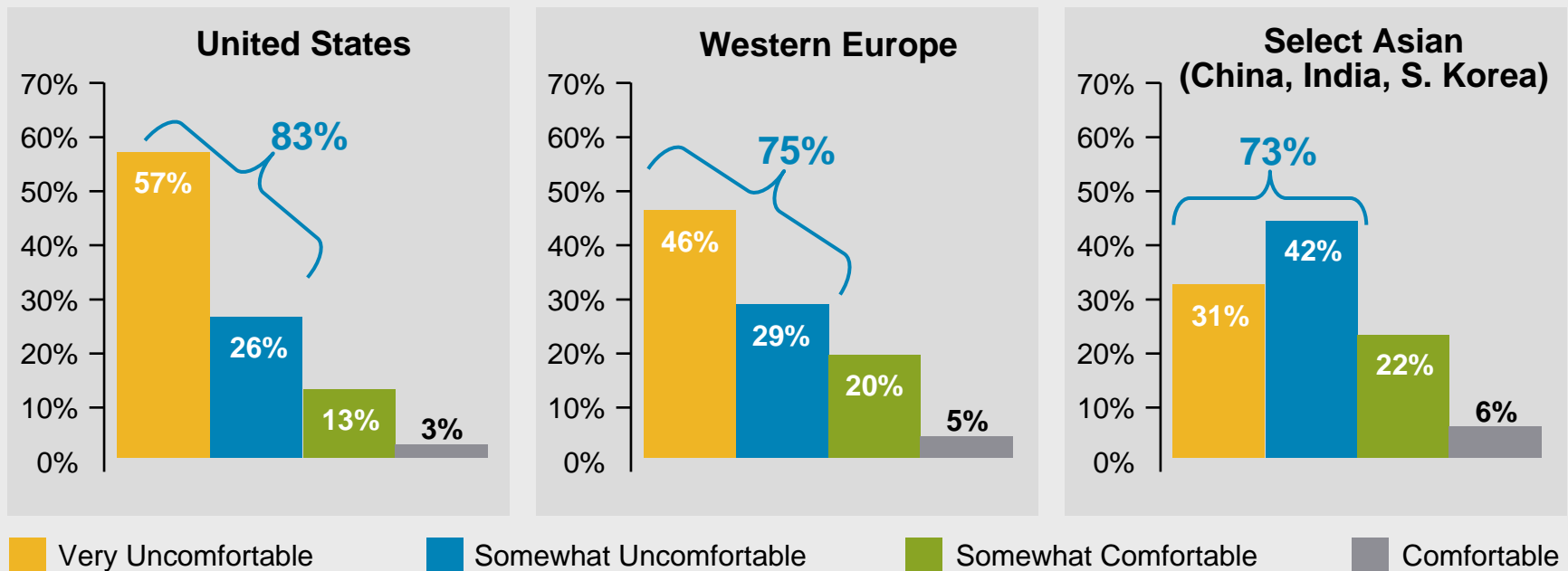
Base: U.S. Broadband Consumers

Public Opinion: Globally, Receptivity Remains in Early Market

- 75% of consumers are “uncomfortable” sharing information for improved ads
- Americans are most “uncomfortable” sharing personal information
- More than 25% of Asian consumers are “comfortable” sharing some information

Receptivity to Sharing Information

Are you comfortable letting your SP use personal information to tailor advertisements to you?



Base: Global Broadband Consumers

Source: Cisco IBSG Connected Life Market Watch, 2009

Public Opinion: Advocacy Groups Have Agendas (and Attention)



Contextual Advertising

What: Content-based ad delivery

Position: If transparent and data collection / retention minimal, practice poses little risk

Behavioral Advertising

What: Matches ads to interests over time

Position: Raises serious questions since offline data may also be merged with online profiles; self-regulation has not worked



Deep Packet Inspection (DPI) / Other Tracking Methods

What: Behavioral targeting

Position: Like postal service reading your mail

Strategy: Establish guidelines / protections to:

- 1) Ensure consistency with consumers' privacy expectations
- 2) Ensure data is tailored to proposed use; not kept / sent to third parties
- 3) Ensure customers are informed / have consented to information use

Concerns

- Tracking / storing private activity
- No consumer visibility
- Perceived use of data
- External party involvement
- Lack of / limited regulation

Wants

- No / limited collection, storage, sharing
- Transparency and consent
- Per-user usage expectations
- Stronger regulation

Information Grouping

- Interaction vs. preference vs. profile vs. behavioral
- In context vs. out of context
- Data from customer vs. data from third party

Unlocking the Opportunity

Industry Must Address Privacy Concerns

- Despite potential multibillion dollar market, consumer privacy concerns could derail opportunity
- Consumers, regulators, and advocacy groups are skeptical about sharing more information in exchange for “better” advertising
- Cisco IBSG has developed a comprehensive methodology to quickly evaluate privacy risks associated with advanced advertising options
- With the right approach, individual control, and choice, consumers will embrace advanced advertising

Advanced advertising can become an accepted information service that delivers real value

Source: Cisco IBSG, 2010

Information Grouping: Two Key Dimensions To Understand Risk

| | | 1. Customer Data Interactions | | | |
|----------------------|-------------------------------|--|--|---|--|
| | | Interaction | Preference | Profile | Behavioral |
| | | <ul style="list-style-type: none"> User-initiated data used for specific purpose Context limited to time-bound action | <ul style="list-style-type: none"> Dynamically configurable service / feature data Customer-provided preference data | <ul style="list-style-type: none"> Static individual / household data Customer data used for specific purpose / service | <ul style="list-style-type: none"> Data inferred from past activity / interactions Activities captured, analyzed, used for unintended action |
| 2. Data Source / Use | From Customer, in Context | <ul style="list-style-type: none"> Data given to SPs by customers; data from observing / tracking customer behavior Data used within context of related services | | | |
| | From Customer, out of Context | <ul style="list-style-type: none"> Data given to SPs by customers; data from observing / tracking customer behavior Data used outside related service Data collected from one platform and used in another platform | | | |
| | Enriched Third-Party Data | <ul style="list-style-type: none"> Information gathered from public / private sources that enriches data analysis and is governed by commercial relationships among vendors, database providers, and customers | | | |










Source: Cisco IBSG, 2010

Information Grouping: Nine Critical Areas Must Be Evaluated

| | | 1. Customer Data Interactions | | | |
|----------------------|-------------------------------|--|---|--|--|
| | | Interaction | Preference | Profile | Behavioral |
| 2. Data Source / Use | From Customer, in Context | <ul style="list-style-type: none"> Implicit opt-in | <ul style="list-style-type: none"> Dynamic user control | <ul style="list-style-type: none"> Reasonable customer expectations | <ul style="list-style-type: none"> Low customer expectations |
| | Examples | <ul style="list-style-type: none"> Interactive ads Search, n-DVR, TVEX | <ul style="list-style-type: none"> Alerts; VoD ad based on movie preference | <ul style="list-style-type: none"> Targeted ad using account data | <ul style="list-style-type: none"> Targeted ad using viewing data |
| | From Customer, out of Context | | <ul style="list-style-type: none"> Dynamic user control Vacation ad based on weather alert preference | <ul style="list-style-type: none"> Low customer expectations Credit assistance ad based on late bill payment history | <ul style="list-style-type: none"> Low customer expectations Insurance ad based on travel-viewing history |
| | Enriched Third-Party Data | | | <ul style="list-style-type: none"> Low customer expectations Targeted ad based on Acxiom data | <ul style="list-style-type: none"> No customer expectations Mobile ad with coupon based on Google searches |
| | Examples | | | | |

Source: Cisco IBSG, 2010

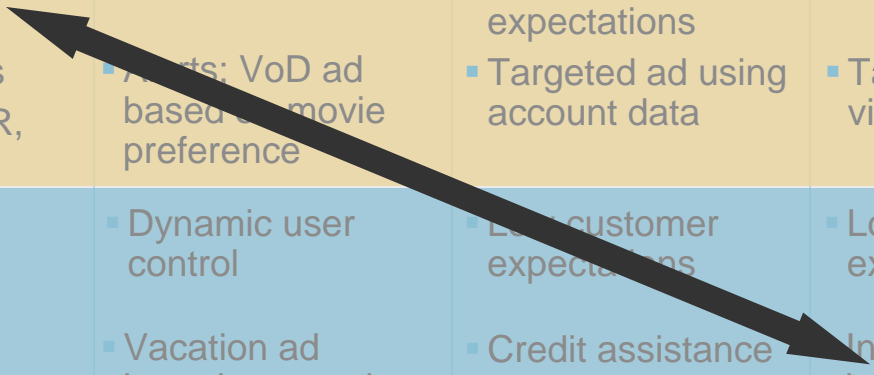
Information Grouping: Established and Emerging Guideposts Exist

| | | 1. Customer Data Interactions | | | |
|----------------------|-------------------------------|---|--|--|---|
| | | Interaction | Preference | Profile | Behavioral |
| 2. Data Source / Use | From Customer, in Context | Online Interactive Ads / RFI  | Information Services  | Membership-Based Marketing  | Activity-Based Recommendations  |
| | From Customer, out of Context | | Preference-Based Marketing  | Membership- / Viewing-Based Ads, Sales, Recommendations  | Internet-Activity-Based Ads  |
| | Enriched Third-Party Data | | | Profile-Based Marketing  | Combined Online / Offline Data-Based Ads  |

Source: Cisco IBSG, 2010

Privacy Risk Assessment: Unique Risk Profiles Exist for Every SP

| | | 1. Customer Data Interactions | | | |
|----------------------|---|--|---|--|---|
| | | Interaction | Preference | Profile | Behavioral |
| 2. Data Source / Use | From Customer, in Context Examples | <p>Lower consumer sensitivity</p> <ul style="list-style-type: none"> Search, n-DVR, TVEX | <ul style="list-style-type: none"> Dynamic user control Ads; VoD ad based on movie preference | <ul style="list-style-type: none"> Reasonable customer expectations Targeted ad using account data | <ul style="list-style-type: none"> Low customer expectations Targeted ad using viewing data |
| | From Customer, out of Context Examples | | <ul style="list-style-type: none"> Dynamic user control Vacation ad based on weather alert preference | <ul style="list-style-type: none"> Low customer expectations Credit assistance ad based on late bill payment history | <ul style="list-style-type: none"> Low customer expectations Ins ba vie |
| | Enriched Third-Party Data Examples | | | | <ul style="list-style-type: none"> Low customer No customer |



Lower consumer sensitivity

Higher consumer sensitivity

Open to debate

Source: Cisco IBSG, 2010

Service Providers that Focus on Positive Consumer Experiences Can Succeed...

Increased Utility

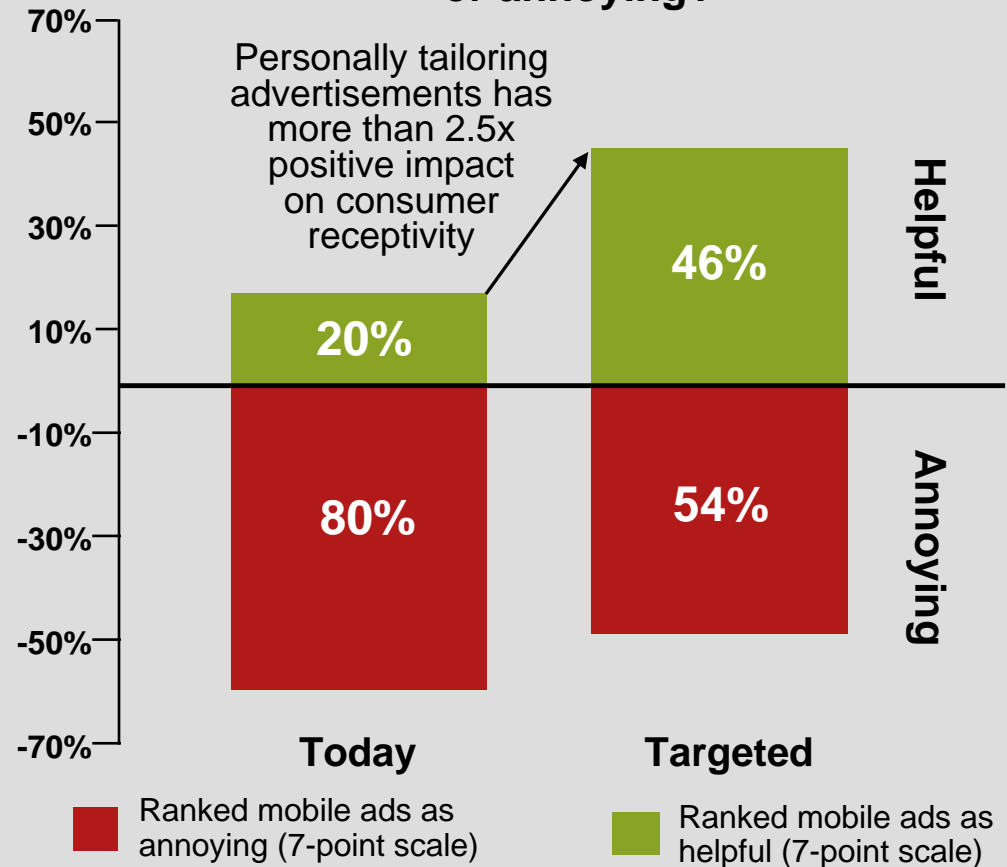
- Consumers more receptive to ads that are relevant to them
- Can be achieved by ads that are:

Tailored to specific customer demographics

Targeted based on consumer-identified interests

Customized through location / other contextual queues

Do you find mobile advertisements helpful or annoying?



Source: Cisco IBSG Connected Life Market Watch, 2009; Base: U.S. Broadband Consumers

...and Get Consumers To Actively Seek New Forms of Advanced Advertising

Advertisements “as” Applications

- Branded applications related to developers’ core business are rising
- Widgets and other useful sources of commonly requested information present new advertising inventory options

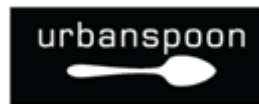
Advertisements “in” Applications

- Applications increasingly contain topical advertisements linked to information requests
- SPs increasing application footprints

Applications



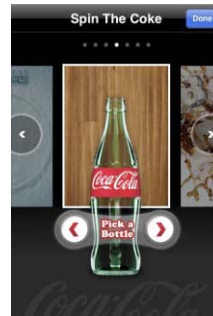
Yowza!!



Urbanspoon



Fandango



Coca-Cola
Spin the Bottle

Platforms



Google



Facebook



Verizon **FiOS TV**

Verizon

Source: Cisco IBSG, 2010

Advanced Advertising Must Deliver Incremental Value to Consumers, SPs

- ✓ **Address consumer privacy concerns** with education and long-term commitment to building trust
- ✓ **Avoid public relations pitfalls** by implementing communications plan before any new advertising capability is deployed; provide clear explanation of consumer benefits and safeguards
- ✓ **Define consumer utility** as benefit customers can clearly articulate
- ✓ **Deliver superior experience** by improving all aspects of previous service

Source: Cisco IBSG, 2010

