Understanding Interfirm Relationships in Business Ecosystems with Interactive Visualization

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Research Objective

Macroscopic Insight into Business Ecosystems with Interactive Visualization
Focus Domain: Mobile Ecosystem
Smartphone Explosion

Source: Basole and Park (2013)
Battle of Platforms

Source: Basole and Karla (2011)
Emergence of Apps & App Stores

Source: Basole and Karla (2012)
Data

SDC Platinum

who. what. when. where. why.
Design Requirements

★ Both top-down and bottom-up examination of an ecosystem are critical.
★ Understanding interfirm connectivity, composition, and temporality is vital.
★ Comparative perspectives drive insights.
★ Communicate agreement summaries first, then details as desired.
★ Provide a familiar metaphor while supporting direct and prompt interaction, not complex queries and commands.
System Design
Three Detail Panels can be shown in the right UI region, including information on company, relationships, and structural characteristics.
User Study

users
Prototypical Users
20+ years experience
Mobile ecosystem experience

phases
Tutorial/Practice/Evaluation

tasks
Search/Browse/Path/Compound

performance
Accuracy/Time
LESSONS LEARNED

• Users were receptive to the ability to quickly browse through long lists of segments, companies, and countries using a familiar explorer-like navigator panel.

• Users commented that given the range of functionalities, additional time was necessary for mastery.

• Users commented that the tool accelerates their time to insight and helps to improve decision quality.
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DESIRED FEATURES

• Ability to save and output information and visualizations
• “Undo” function to return visualizations to a previous state.
• More flexible ways to select sub-networks and individual nodes via an operation such as rubber-banding.
• Present a subset of the visualization in a traditional list form,
Conclusions

Described the development process, design, instantiation, and evaluation of a system, dotlink360, for helping corporate analysts gain insight into business ecosystems.

System enables analysts, investors, and executives to make sense of the complex interfirm landscape and conduct competitive intelligence analysis.

Presented a requirements-driven analysis of the domain, with insight gained from an initial field study and from the design process and evaluation of the system.

Contributes to the relatively unexplored, but promising area of exploratory information visualization in market research and business strategy.
Other data sources.

Dynamically-driven and custom data.

Enhance filter.

Longitudinal user study.

Web-based platform.
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Thank you! Questions?

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The **Composition View** shows the agreement portfolios of companies, market segments, and countries. The top bar for each encodes proportion of agreement types, while the bottom depicts total count.
The **Timeline View** shows total agreement count relative to primary segment and overall ecosystem (top) and a yearly/monthly breakdown by agreement type (bottom).