The Platformisation of the European Mobile Industry

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Introduction

- Huge success of digital mobile communications, with Europe as frontrunner, since 1990s
- Based on vertically coordinated and integrated set-up, dominated by mobile operators (ownership of customer relationship and ownership of spectrum licence) & mobile vendors (technological design)
- Now severe challenges to this set-up brought by software platforms and internet-like end-to-end architectures
- ‘Open’ US-based IT and internet industry versus ‘Closed’ European mobile telecommunications industry?
- Revisionist approach challenging both visions: ‘Open but not open’ platform business models
The political economy of ICT design

- Business model = the way in which control and value are configured within a value network
- Political economy tradition in communication studies & ICT design
- Design configurations conforming to Idealist vs. Strategic vision (Mansell, 1993)
- Calls for revitalisation (McChesney, 2004; Mansell, 2004)
  - Context of liberalisation => context of mobile-internet convergence
  - Link up with findings from ICT innovation literatures - network economics and strategic management

<table>
<thead>
<tr>
<th>CONTROL PARAMETERS</th>
<th>VALUE PARAMETERS</th>
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<tbody>
<tr>
<td>Value Network Parameters</td>
<td>Functional Architecture Parameters</td>
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<tr>
<td>Combination of Assets</td>
<td>Modularity</td>
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<tr>
<td>Concentrated</td>
<td>Distributed</td>
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<td>Vertical Integration</td>
<td>Distribution of Intelligence</td>
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<td>Integrated</td>
<td>Disintegrated</td>
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<td>Customer Ownership</td>
<td>Interoperability</td>
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<tr>
<td>Direct</td>
<td>Intermediated</td>
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Theories of the platform (1)

- Key issue: dealing with modularity and interdependency
- Typical IT and Internet-related literature: modularity, openness and end-to-end
  - Grove (1995): from vertical integration to horizontal disintegration
  - Isenberg (1998): control passes from centre to edge
  - Baldwin & Clark (2000): design rules for technical modularity
  - Langlois (2003): modularity causes the end of the Chandlerian Visible Hand
Theories of the platform (2)

- Growing critique of unbound modularity thesis; platformisation instead
  - No automatic link between technical and market modularity (Ernst, 2005)
  - How open is open enough? (West, 2003)
  - System integrators not Legoland, network flagships (Pavitt, 2003; Iansiti & Levien, 2004)
  - Importance of platforms with structural and durable character (Bresnahan, 1999)
- Successful companies follow platform leadership strategies (Gawer & Cusumano, 2002)
- Business models in platform markets (Cortade, 2006)
- Platform competition in the form of two-sided or multi-sided networks (Rochet & Tirole, 2003; Evans et al, 2005)
- Platform as ‘black box’ => platform boundary evolution
  - => In mobile industry, platform ambiguity
  - => Opening black box + looking at differences between platforms
The platformisation of mobile communications

- Vertical ‘stovepipe’ BSS/OSS model
  - Based on ‘killer applications’ concept: end-user application justifies dedicated system
  - Third-party service provision difficult and contract-based (TOM, eTOM)
- Walled garden model as ‘defective’ platform model
  - One-sided platform: developers as suppliers, not customers
- Challenged by whole range of ‘wannabe platforms’ for mobile apps
  - Smartphone operating systems (Symbian, Windows Mobile, LiMo, Android, iPhone OSX,…)
  - Mobile browsers (Opera, Webkit,…)
  - Application portals (App Store, Android Market,…)
  - IT Service Delivery Platforms with 3rd party APIs (IMS,…)
  - Applications as platforms (Facebook Mobile,…)
  - Container APIs for data portability (Open Social,…)
- Two-sided platforms & platform leadership strategies
- Platform ambiguity: no single technological artefact or value chain segment
Platforms and gatekeeper roles

- Platforms and ‘architectural advantage’ (Jacobides et al, 2006)
  - Performance bottlenecks (Baldwin & Clark, 2006)
  - Locus of high transaction costs (Baldwin, 2007)
- Specific nature of information and communication processes
  - Concept of information gatekeeper (e.g. Lewin, 1951): Places where information services are controlled and altered
  - Gatekeeper roles: not only filter and select information (i.e. the gatekeeper acts as a bottleneck) but also qualitatively alter the informational content (for better or for worse) through active accumulation, processing and packaging (i.e. the gatekeeper adds ‘value’)
- How to analyse and compare platform business models: different control configurations of gatekeeper roles, and repercussions for value creation and appropriation
Gatekeeper roles in mobile communications: telco-centric model

- Vodafone Live!
- User accesses services via central mediating entity
- Service provision result of individual negotiations
- Active role of platform in selecting services
- Service development only open to selected partners
- Network operator combines all four gatekeeper roles
- ‘Defective’ platform model
Gatekeeper roles in mobile communications: device-centric model

- Apple iPhone
- Device manufacturer provides own services, own SDK, establishes service portal (App store)
- Device manufacturer controls all gatekeeper roles, network operator still has some stake in identity management and charging & billing
- Influence of network operator in service provision bypassed through powerful mobile browser
- Semi-open: proprietary develop. language, certification of services
- ‘Revolutionary’ revenue sharing deal with operators has been abandoned - remains niche?
Gatekeeper roles in mobile communications: aggregator-centric model

- Facebook Mobile
- Service aggregator provides FBML and offers portal, linking users to applications through profile data
- Facebook controls profile information, indirect revenue generation, service brokerage; operator some stake in identity management and charging & billing
- Non-exclusive, can be bypassed; no certification
- Proprietary language, ownership of profile data
- Monetisation issues (Beacon)
Gatekeeper roles in mobile communications: service-centric model

- Google’s Open Social
- Largely theoretical model
- Open Social allows each service to integrate platform functionalities, to become a platform
- Open Social’s open API’s function as ‘meta-platform’ for data portability across platforms
- Service providers are free to select features and control some of the gatekeeper roles
- When service providers use Google’s meta-tools, some control is transferred
- Monetisation for individual service providers uncertain
Gatekeeper roles in mobile communications

- All mobile service provision business models centred on control over four gatekeeper roles:
  - Service Creation Environment: development & hosting tools for 3rd party service developers
  - Profile/Identity Management: management of user data and user preferences
  - Service Brokerage: reference point for end-users to retrieve, subscribe and use mobile services
  - Charging & Billing: ticketing and payment functionalities for mobile services
- Emergent, US-originated models migrate control over gatekeeper roles away from the mobile operator
- Still very strong diversity in platform models
Towards a typology of platform models

- Little attention paid in literature so far
- Political economy perspective: look at link between control and value configurations
- All platforms centred on control over gatekeeper roles

- Central tenet of platform concept: can do this without controlling value proposition + without controlling value delivery (customer relationship)
- \( \Rightarrow \) Typology based on control and value architectures
- Enabler, System Integrator, Neutral, Broker platform models
- More fine-grained, offers basis for further exploration

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<th>Control over Assets</th>
<th>No Control over Customers</th>
<th>Control over Customers</th>
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<tbody>
<tr>
<td>Enabler Platform</td>
<td>The owner of the gatekeeper role(s) possesses many of the necessary assets to ensure the value proposition, but does not control the customer relationship</td>
<td>The owner of the gatekeeper role(s) possesses many of the necessary assets to ensure the value proposition, and also establishes a relationship with (some) end customers. However, the platform owner actively encourages entry of ‘third-party’ service providers</td>
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<td>Examples: IMS, Intel</td>
<td>Examples: iPhone, Microsoft</td>
<td></td>
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<td>Neutral Platform</td>
<td>The owner of the gatekeeper role(s) is strongly reliant on the assets of other actors to create the value proposition, and does not control the customer relationship</td>
<td>The owner of the gatekeeper role(s) is strongly reliant on the assets of other actors to create the value proposition, but does control the customer relationship</td>
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<td>Examples: Open Social, PayPal</td>
<td>Example: eBay Mobile, dating clubs</td>
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Conclusion

- Two-sided platform strategies are permeating European mobile industry
- Emergent, US-originated platform models are migrating control over gatekeeper roles away from mobile operator
- Different types of platforms can be distinguished, according to different control and value configurations
- Potential implications?
  - Mobile operators: need to move towards two-sided model
  - Regulators: cannot expect full openness, but rather difficult to isolate and regulate platform markets
  - End users: increased choice in terms of applications, but also diminished stability/security, new forms of lock-in and increased exploitation of personal data