Analysis - Software Business Model Prevails

By Keith Mallinson Sunday, March 7, 2010

Maximizing global scale on device platforms and application stores is essential.

Manufacturers' costs in producing physical goods for consumers such as cars, washing machines and cathode ray tube TVs were predominantly in labor and capital-intensive manufacturing. Cost structures are changing – particularly for those products that increasingly resemble computers.

Smartphones represent one of the most striking examples, with manufactured hardware costs typically accounting for around one-third of selling prices. An article in the Jan. 21, 2010, edition of The Economist indicated that manufactured costs for smartphones currently range $170-$180, based on the cited "teardown" figures from iSuppli (see chart) while unsubsidized average selling prices are between $500 and $600 wholesale.


Keith Mallinson

Costs were derived from independent teardown analysis. ASPs are corroborated by handset vendor disclosures. The iPhone ASP was $610 last summer. Additional direct costs include software licenses, IPR royalties for radio technologies, video codecs and other capabilities.

Where is the rest of the money going with gross profit margins exceeding 50 percent in many cases, while some major vendors are struggling with losses? The problem is in fixed and indirect costs with the need for large sales volumes to support them.

Despite the availability of some open source software – ostensibly for free – handset developments can cost hundreds of millions of dollars. Similarly to patented pharmaceuticals, which also have very low manufacturing costs in comparison to selling prices, it can be worth spending relatively large sums on sales, marketing and distribution to drive volume. Nokia is master of this from to Tallinn to Timbuktu. However, unlike in patented pharmaceuticals where there are typically no directly competing products, mobile phone vendors must take a gamble on the market shares they believe their brands and individual models will attract.

In PC software, direct costs in production are no more than a few percent for burning CDs, printing manuals and in packaging. Despite low direct costs for all, the marketplace in PC operating systems and mainstream applications such as word processors, spreadsheets and e-mail clients has been a bloodbath for virtually every vendor except Microsoft and Apple.

Similarly, there's little scope for competitive advantage on the variable cost side among handset vendors. Broadly speaking, they all pay about the same prices for standard displays, merchant market basebands and other standard components. The supply chain is quite disaggregated with silicon foundries such as TSMC and subcontract manufacturers such as Foxconn used by small and large players alike. Even IPR from 3G leader Qualcomm is charged at similar rates for all licensees.

Competitive advantage is derived from indirect costs such as in R&D, brand and distribution. Sales volume amortizes these investments, including own sales and even competitors' sales where IPR cross-licensing can reduce out-ofpocket royalty expenditures on one's own sales. Nokia also has made money on the side by licensing Symbian/S60 software. Vendors with low sales volumes can struggle to cover even modest indirect expenditures. It's no surprise that dozens of so-called white box or bandit phone manufacturers in China are flourishing by relying on chipset vendor reference designs, piracy and counterfeiting while making minimal expenditures in R&D or brand development.

STORES GALORE

Maximizing software scale on the device and in supporting infrastructure for developers and applications stores is paramount. Apple's iPhone sales volumes are still modest in comparison to the total handset market, but its Model T Ford-like uniformity, with a single screen size and UI, make it a simple and reliable platform for App Store developers. Nokia's three device software platforms – lowend S40, Symbian/S60 and MeeGo (formerly Maemo) for smartbooks – with Ovi atop provides a coherent and reliable API environment for developers with Nokia's superlative brand and distribution reach.

Estimated cost of parts

Cost of components*, 2009, $

	Palm Pre	Apple iPhone	Toshiba TG01	Motorola Droid
Integrated circuits	83.96	91.38	68.39	60.83
Display/ touchscreen	38.80	34.65	35.30	35.25
Mechanical‡	19.63	17.80	21.88	20.23
Camera	7.50	9.35	12.80	14.25
Battery	4.25	5.07	4.71	4.25
Other	16.51	11.82	30.60	44.30
Total	170.65	170.07	173.68	179.11

*Latest data available †3GS 16GB
‡Includes electromechanical

Source: iSuppli

Wireless carriers also are having a go with the backing of the GSM Association, as I discovered while attending February's Mobile World Congress in Barcelona. The Wholesale Applications Community includes 15 of the world's largest (with America Movil, AT&T, T-Mobile, KT, NTT DoCoMo, Orange and Telefonica) and the four Joint Innovation Lab members (Vodafone, China Mobile, Softbank and Verizon Wireless).

These have privileged access to networkgenerated information, subscriber profiles and payment relationships that could differentiate their offerings. However, they are a disparate group of correspondents and competitors that also suffer from enormous fragmentation with service delivery and devices. The mission for a single point-of-entry for developers is laudable, but it will not be possible to consistently and reliability support hundreds of networks and their 3 billion devices with the kind of user experience available elsewhere.

Ericsson also used Barcelona to promote eStore, its hosted white label applications store, providing competence and scale that individual carriers cannot attain. It promises to provide its software platforms and worldwide datacenter operations to support any device with carrier branded and commercially controlled offerings.

Mallinson is founder of WiseHarbor, solving commercial problems in wireless and mobile communications, www.wiseharbor.com. He can be reached at kmallinson@wiseharbor.com.

Rate Article:

0 COMMENTS