Content is not king

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Main points:

- Long historical tradition of overemphasis on content
- Connectivity has traditionally been valued much more than content
- Social connectivity very important but neglected

Note: Content (defined as material prepared by professionals for wide distributions) is big and important, it is just not as big or as important as connectivity.



Big challenges, lack of solutions:



MONDAY, MAY 23, 2005 - VOL. CCXLV NO. 100 - ** \$1.00

Slower Growth Hits Cellphone Services Overseas

In EU, Japan, Saturation Leads to Some Contraction; Looking Beyond Voice, Text

By DAVID PRINGLE

Markets for cellphone services in Europe and Japan, where explosive growth spearheaded the wireless revolution in the 1990s, are slowing substantially and in some places contracting—signaling big challenges for large providers and a shake-up for the entire industry.

Some providers are introducing new services, such as picture messaging and video downloads, but the revenue they generate is minuscule alongside the vast sums spent on voice calls, and their growth is expected to be slow.



Common wisdom vs. reality:

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mobilepipeline

June 21, 2005 Cellular Data Fails To Impress Businesses: Survey

By Mobile Pipeline Staff

Mobile Pipeline

Consumers, particularly those in the U.S., remain unimpressed with cellular data offerings and only one-third of U.S. businesses are using or testing such services, a user survey by Yankee Group released Tuesday claims.



New threat or ancient underappreciated truth?

The New York Times

WEDNESDAY, JUNE 29, 2005

By and for the Masses

Forget File Swapping. User-Created Content Is Radically Changing the Web.



Sharing will define the next phase of the Web, said Jeff Weiner of Yahoo, pictured at rear with David Ku, front, and Eckart Walther.

Digital Technology Center

Another potential threat to the distributors of proprietary content.

Indeed, the abundance of user-generated content — which includes online games, desktop video and citizen journalism sites — is reshaping the debate over file sharing. Many Internet industry executives think it poses a new kind of threat to Hollywood, the recording industry and other purveyors of proprietary content: not piracy of their work, but a compelling alternative.

The new services offer a bottom-up creative process that is shifting the flow of information away from a one-way broadcast or publishing model, giving rise to a wave of new business ventures and touching off a scramble by media and technology companies to respond.

Rejection of WAP (content) and eager acceptance of SMS (connectivity) should not have been a surprise: it fits the dominant historical pattern



Just as consumers can sometimes surprise by rejecting technology (eg, wAP), they can also surprise by embracing it (eg, short messaging).



Example of common but ludicrous overvaluation of content

What would the Internet be without "content?" It would be a valueless collection of silent machines with gray screens. It would be the electronic equivalent of a marine desert - lovely elements, nice colors, no life. It would be nothing.

E. Bronfman, Jr., May 2000



Value of bits:

	Price/MB
Cable TV	\$0.0001
Wired Phone	0.0800
Mobile Phone	3.0000
SMS	3000.0000



Selected sectors of U.S. economy

Industry	1994 revenues (billions)	1997 revenues (billions)	annual growth rate
telephone	\$199.3	\$256.1	8.7%
U.S. Postal Service	49.6	58.3	5.5
advertising	151.7	187.5	7.3
motion pictures	53.5	63.0	5.6
movie theaters	6.2	7.6	7.0
video tape rentals	7.0	7.2	0.9
broadcast industries			
television broadcasting	31.1	36.9	5.9
radio broadcasting	10.5	13.5	8.7
newspapers	47.2	55.3	5.4
magazines	17.4	19.9	4.6
consumer spending on "content"	113.9	133.5	5.4



Revenues of U.S. cable TV and cell phone industries

	cable TV	cellular	
year	(millions)	(millions)	
1987	\$11,563	\$942	
1992	21,079	6,688	
1997	30,784	25,575	
2000		≈50,000	

Radio moved from point-to-point connectivity to content broadcasting, but now is moving back



Typical usage pattern of communication services:









Dominant types of communication: business and social, not content, in the past as well as today

Thirty years ago you left the city of Assur. You have never made a deposit since, and we have not recovered one shekel of silver from you, but we have never made you feel bad about this. Our tablets have been going to you with caravan after caravan, but no report from you has ever come here.

circa 2000 B.C.

A fine thing you did! You didn't take me with you to the city! If you don't want to take me with you to Alexandria, I won't write you a letter, I won't talk to you, I won't say Hello to you even. ... A fine thing you did, all right. Big gifts you sent me - chicken feed! They played a trick on me there, the 12th, the day you sailed. Send for me, I beg you. If you don't, I won't eat, I won't drink. There!

circa 200 A.D.



Historically common pattern: government and business decision-makers emphasize content, users prefer connectivity

For the first 30 years of the telephone, promoters struggled to identify the killer application that would promote its wide adoption by home owners and businesses. At first the telephone was promoted as a replacement for the telegraph, allowing businesses to send messages more easily and without an operator. Telephone promoters in the early years touted the telephone as new service to broadcast news, concerts, church services, weather reports, etc. Industry journals publicized inventive uses of the telephone such as sales by telephone, consulting with doctors, ordering groceries over the telephone, listening to school lectures and even long distance Christian Science healing! The concept that someone would buy the telephone to chat was simply inconceivable at that time.

C. Fischer, America Calling



The Internet succeeded by accident. Email, its "killer app," was not among the original design criteria:

The popularity of email was not foreseen by the ARPANET's planners. Roberts had not included electronic mail in the original blueprint for the network. In fact, in 1967 he had called the ability to send messages between users "not an important motivation for a network of scientific computers" Why then was the popularity of email such a surprise? One answer is that it represented a radical shift in the ARPANET's identity and purpose. The rationale for building the network had focused on providing access to computers rather than to people.

J. Abbate, Inventing the Internet



Example of attitude that the phone industry had to overcome before it could grow as large as it did:

The unlimited use of the telephone leads to a vast amount of unnecessary occupation of the wires, and to much borrowing of telephones by parties who are not subscribers. Thus the telephone system is so encumbered with calls which are unnecessary, and largely illegitimate, that the service is greatly impaired, and subscribers, to whom prompt connection is essential, become dissatisfied.

Bell company announcement, 1880s



Many disappointing "content" ventures:

- Phone company information services
- Videotext experiments (including AT&T venture with Knight Ridder)
- Minitel
- AOL (started out as game network), Prodigy,

Inside stories of the Knight Ridder and Prodigy cases: demand for connectivity in unexpected settings



Quantitative measures:

- Sarnoff's Law: Value of content distribution network grows like n
- Metcalfe's Law: Value of connectivity network grows like n²
- Odlyzko & Tilly: Metcalfe's Law wrong, value of general connectivity network grows like n*log(n)

n*log(n) grows faster than n, but difference is sufficiently slow to enable the "content is king" dogma to persist

n = number of participants



Quantitative measures (cont'd):

- Odlyzko-Tilly n*log(n) "law"
- general observations supporting the "content is not king" thesis
- Chris Anderson's "long tails" thesis

all consistent with, and supported by, Zipf's Law (1/n valuation of n-th most valuable item)





Content is valuable

Content not as valuable as connectivity

Social connectivity should be promoted



Further data, discussions, and speculations in papers and presentation decks at:

http://www.dtc.umn.edu/~odlyzko

