

Discovering mobile services – a new perspective

By Richard Jesty, Peggy Albright and Peggy Ann Salz

Richard Jesty, *Project Leader*

Richard is a Senior Consultant with Informa Telecoms and Media, focusing on mobile content and services worldwide. He has built up an in-depth knowledge of the market, developing research amongst Informa's extensive database of telecoms professionals, and carrying out a number of consultancy assignments in Europe and the US. He is the lead author of a range of strategic reports analysing on the global mobile services market and is a frequent speaker and chair at international conferences.

Peggy Albright, *ITM research partner*

Peggy is a long-time editorial consultant with extensive experience of the mobile and high tech industries. She is also a regular contributor to Informa Telecoms & Media continuous research services including Mobile Communications International, Mobile Media and Wireless Broadband Analyst. Peggy was previously the West Coast Bureau Chief of Wireless Week, and led their coverage of 3G technologies.

Peggy Ann Salz, *ITM research partner*

Peggy Ann Salz is an experienced writer and editor, focusing on the impact of technology on business strategy. In addition to her work in print media, where she has contributed to publications such as The International Herald Tribune, she manages and edits a number of websites that track the mobile industry and the business models that will shape its future.

This white paper contains the findings of independent research and analysis carried out by Informa Telecoms & Media in December 2005 and January 2006. The research was sponsored by VOCEL.

Table of Contents

Executive summary	1
Mobile content – the key issues	2
Enabling ease of use – the key players	5
Benchmarking	8
Improved uptake – assessing the benefits	10

Executive Summary

The mobile and content industry is on the cusp of fundamental change, with consumers increasingly becoming the decisive players in the value chain. While voice revenues will remain the primary generator for operators in the medium term, mobile data revenues are forecast to increase. However unless operators and other mobile value chain players adopt radical new customer relationship management strategies, the new revenue streams from data services will not materialise as planned.

One of the barriers to revenue growth is the difficulty of accessing mobile download content. All the indications from both Europe and the US are that mobile users are not downloading content, but are confining themselves to applications which are already pre-loaded on their devices.

The practice of mass-marketing handsets on the basis of post-paid, prepaid, business or consumer categories, still the norm in the industry, is not conveying essential information to customers. The industry recognizes that highly personalized marketing, by definition, could require consent of the subscriber. Operators seeking to drive data revenues should consider permission-based marketing as a viable enabler of personalized services.

A number of service providers have developed products and solutions that can reduce the impacts of network latency and navigation barriers on mobile content acceptance and delivery: for example some vendors now offer client-server applications to automate and personalize the delivery of content on the mobile phone.

Taking more of a “push” approach, VOCEL has a solution that sends interactive messages to the user’s mobile phone. This “wakes” up content and applications cached on the mobile device, delivering an experience of immediate access to content. It also allows the company to recommend relevant items by matching what it knows about user preferences with the available range of on-portal content from the operator.

The requirement for mobile users to navigate through multiple nested menus is one of the most problematical barriers to market development. Recent tests of a variety of handsets, conducted by Informa Telecoms& Media, found that users typically have to click through 10-40 screens and spend more than two minutes to download some of the most popular ring tones or games.

This paper presents findings from those tests and offers a market model to demonstrate how improved end-user navigation tools and more personalized marketing could significantly raise operators’ revenues over the next few years.

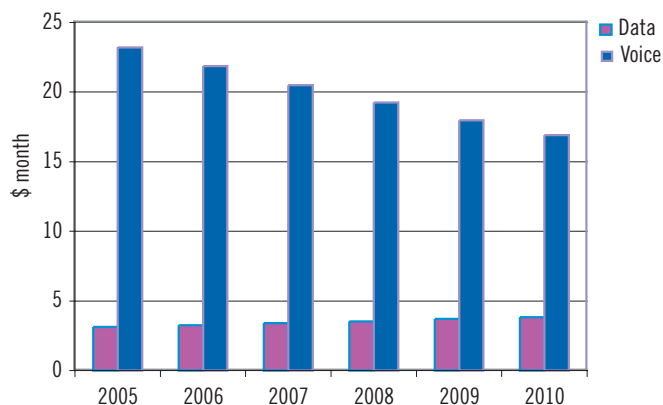
In summary, this paper recommends a strategy operators can use to overcome these limitations and drive more traffic through their portals. This strategy includes better segmenting the market, developing content marketing strategies that will enable individual customers to easily find applications that best suit their needs, and delivering services in a way that lets consumers define the manner of marketing and the nature of the content received.

By adopting such a strategy, we believe that operator revenues could be raised by around \$10 billion cumulatively in Europe and just over \$4 billion in North America over five years, amounting to just under \$14 billion in the two regions combined.

1. Mobile content – the key issues

The cellular industry is on the cusp of fundamental change. While voice services will remain the primary revenue generator for operators for the foreseeable future, average revenue per user (ARPU) is forecast to decline from its current level of \$27 per month to \$21 in 2010. Although mobile data revenues are expected to increase over the next five years, these will not make up the shortfall unless operators adopt radical new marketing and customer relationship management strategies.

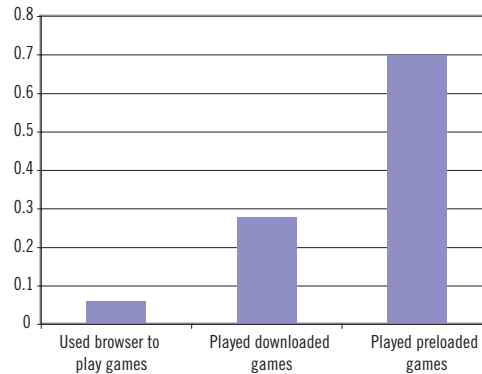
Chart 1: Cellular operators' voice and data revenues worldwide



Source: Informa Telecoms & Media

Content access

One of the barriers to growth is the difficulty of accessing mobile download content. All the indications from both Europe and the US are that mobile users are not downloading content, but are confining themselves to applications which are already pre-loaded on their devices. For example, the games publisher i-Play found in a recent five country survey carried out in Europe that of almost 70% who had played a mobile game, only 5% had successfully downloaded one. In the US, the research firm M:Metrics found very similar results, as shown in Chart 2.

Chart 2: US mobile games usage

Source: M:Metrics

Added to this is the sheer range and volume of mobile content available today. At the end of 2005 there were upwards of 55,000 commercially available applications, including 5,000 from Symbian, 45,000 from Java as well as the BREW arena, which runs into several thousand further applications, although the precise number is not disclosed by Qualcomm.

Menu Navigation

The requirement for mobile users to navigate through multiple nested menus is one of the most problematical barriers to market development. For example, i-Play found in the survey mentioned earlier that 30% of the respondents did not know if their handsets had the capability to download games. And 18% said they had not downloaded a mobile game because they did not understand what to do. Specific problems included:

- Multiple clicks to access content
- Merchandising of content on the devices is difficult to navigate
- Appearance of confusing messages such as ‘source unknown, continue?’ prior to downloading games on some handsets and networks
- Successful downloads saved in a handset location where the consumer is unlikely to find it.

Recent tests of a variety of handsets, conducted by Informa Telecoms & Media, found that users typically have to click through 10-40 screens and spend more than two minutes to download some of the most popular ring tones or games. This is described in detail in section 3.

Personalized Marketing

The practice of mass-marketing handsets on the basis of post-paid, prepaid, business or consumer categories, still the norm in the industry, is not conveying essential information to customers.

With new operators and content channels entering the market and penetration rates reaching saturation levels in many countries, operators must find better ways to identify customer segments. Products and services must closely meet the needs of target segments and distribution channels must be tailored for each group. This more personalized approach will become even more important as 3G services reach more markets worldwide and customers begin to view their handsets more than as phones or text-messaging tools, but as personal broadband devices.

The industry recognizes that highly personalized marketing, by definition, could require consent of the subscriber. Operators seeking to drive data revenues should consider permission-based marketing as a viable enabler of personalized services.

The Mobile Marketing Association, reporting on an attitude and usage study it conducted in 2005, observed that meaningful numbers of consumers have indicated they will be receptive to mobile value-added services as long as they can define the frequency of the marketing and the nature of the content received via their mobile devices. Overall, the youth market was most in favour with around 40% of teens and twenty year-olds expressing high or moderate interest.

Among the respondents overall the following applications generated the highest interest:

- receiving mobile coupons
- downloading ring tones, wall paper or games
- receiving status alerts about their account or products purchased
- participating in sweepstakes contests
- receiving alerts for special sales.

Changes in the Mobile Content Value Chain

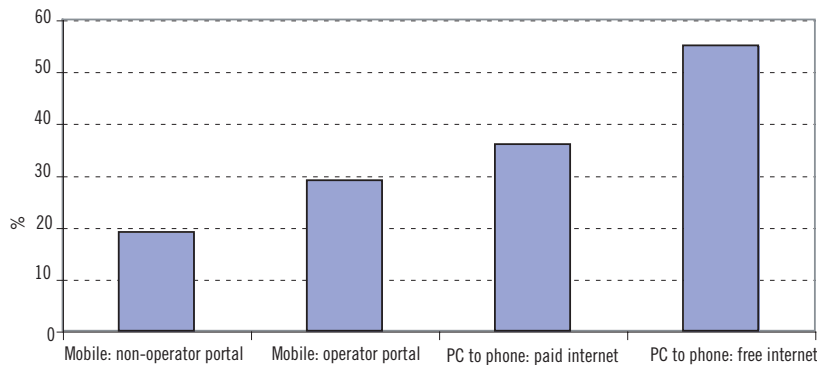
Today, the mobile operator has the dominant role in providing mobile content, in large part because of the personal relationship operators have with their consumers through subscriptions, the billing process and the operator's mobile portal, which is used to influence what the consumer sees on the screen of their device.

This role will shift within five years' time, according to Informa Telecoms and Media research. By then, content/brand owners and end users will take on a more central role in the creation, delivery and use of mobile content.

Operators worldwide are also seeing increased competition from third-party suppliers that can sell their content directly to consumers, and already in Europe, a significant proportion of content transactions are conducted outside operators' portals. In the US too, this kind of off-portal content is now becoming available.

According to Nokia's December 2005 study of Series 60 customers' handset usage, non-operator mobile portals accounted for around 40% of all mobile downloads. However, among all those who installed third party applications on their phones, the study also found that the majority downloaded applications from the fixed line internet in preference to using any kind of mobile portal, as shown in Chart 3 below.

Chart 3: Source of Third-Party Applications Purchased by Nokia Users



Source: Nokia

2 Enabling ease of use – the key players

A number of companies have developed products and solutions that can reduce the impacts of network latency and navigation barriers on mobile content acceptance and delivery.

Latency

A number of companies are offering technology to address the issue of network latency, which can lengthen download times and compromise quality of service for the consumer. A leader in this area is Openwave, whose optimization solution (part of the Openwave version 7 browser) applies patented compression techniques and protocol optimization on the IP layer, the transport protocol layer, the application protocol layer and the content layer to accelerate data delivery.

Bytemobile addresses the latency problem by reducing per-transaction data volumes. Its software, which can be installed in the operator's core network or embedded in smart phones and browsers, streamlines and reduces the amount of data delivered to the phone, for example by sending the text before the graphics.

Navigation

The range of companies addressing navigation challenges is also growing, and a number of vendors now offer client-server applications to automate and personalize the delivery of content on the mobile phone. This group of so-called "on-device" portal providers caters to both operators and content owners, enabling both to brand the portal and set business rules for content delivery (such as the balance between on-portal and off-portal content that users can access).

Companies serving this need include

- SurfKitchen (the sector leader)
- Amplefuture
- Cibenix.

Qualcomm Internet Services (QIS) also seeks to play in this space with uiOne, the customizable user interface platform it inherited from Trigenix following its acquisition of that company in late 2004. uiOne has since evolved into a product portfolio combining a home-screen replacement and a skinning application. The UI skins can be deployed at the OEM level on behalf of operators, who may want to offer a variety of UIs for different segments or they can be deployed by customers wanting to customize their devices.

Openwave has developed what it calls the Mobile Integrated Dynamic Application System (MIDAS), which will contain a browser component and on-device portal applications such as a media store-front, offline portal and home-screen replacement. Set to launch in April 2006, MIDAS is designed to help manufacturers create customized devices for different operators, and address the personal content and services preferences of different end-user segments.

An increasing number of mobile operators and content providers, expecting that users will want the ability to search for content they want, have implemented search engine technology to guide users to desired information and products. T-Mobile offers Google, Vodafone provides a white-label search solution supplied by Fast Search & Transfer, and Cingular Wireless recently selected Infospace.

Seeking to take this a step further to help users discover content they didn't know existed, a growing number of companies are gearing up to take their offer to the next level with

the help of a new functionality known as recommendation engines. This technology, modelled after the approach pioneered by online bookseller Amazon.com, suggests content to individual customers based on their stated preferences as well as usage behaviours and intelligence the network develops about what like-minded customers consume.

The VOCEL approach

Taking more of a “push” approach, VOCEL has a solution that sends interactive messages to the user’s mobile phone. This “wakes” up content and applications cached on the mobile device, delivering an experience of immediate access to content.

A new component of this solution is the Interactive Commerce Accelerator (INCA), which addresses content discovery by pushing relevant new content to subscribers based on their demographics and personal profiles. The application can be preloaded on the phones, downloaded at a retail store, or offered as a free over the air download by the operator. Once on the phone, INCA offers subscribers the opportunity to opt-in for alerts on mobile content and services.

As an incentive to encourage users to download INCA, VOCEL provides them with a free wallpaper or ringtone in return for choosing the application and answering the set-up questions which capture important data about users’ interests and demographics. These then provide VOCEL with customer insights on which it can base its content alerts and offers. It also allows the company to recommend relevant items by matching what it knows about user preferences with the available range of on-portal content from the operator. This data is combined with data such as purchase history and search terms to feed the VOCEL inference engine which provides customized product offerings using collaborative filtering.

In practice, users would be sent an initial message inviting them to receive regular information alerts about new ringtones, for example. These alerts would be accompanied by a screen presenting the user the option to purchase the content – a screen that could also be repurposed to allow advertisers to sponsor the download.

VOCEL uses what it terms “application directed SMS messaging” to hide network latency from users. Essentially, the company pushes the content to the phone before users actually receive an alert informing them about new content availability. Thus when users opt to make a purchase, there is no delay because the digital product is already on the phone. BREW users perceive this as an instant, one-click purchase, while Java (J2ME) users also experience a very low latency with a two-click purchase.

According to the company, this same technology and approach can help operators to direct users to additional and relevant content or – more importantly – encourage them

to discover similar content for themselves. To this end VOCEL provides operators with a PC based dashboard of features and functionality that allow them to control what content is delivered to which user on an individual basis. It also ensures that operators can promote fresh content on a regular basis to those users most likely to purchase it, and so grow their on-portal revenues.

3. Benchmarking

To assess the effectiveness of the currently available mobile handset navigation technologies, Informa tested the number of keystrokes required and the timing involved when downloading common applications from a number of leading mobile content services in Europe and the US.

Seven mobile operator content services were tested during December/January 2005:

- Verizon Get It Now (using an Audiovox CDM-8900, a Verizon Wireless phone with access to the BREW-enabled Get It Now service)
- Cingular's new MEdiaNet (using a Motorola RAZR, a Cingular Wireless GPRS phone with access to the MEdia Net service)
- T-Mobile USA t-zones (using a Nokia 6101, a T-Mobile USA GPRS phone with access to the t-zone service)
- Orange World UK (using a Motorola v600, an Orange UK handset that has an Orange World download client with access to the GPRS-based service)
- Vodafone live UK with 3G (using a Nokia 6680, a Vodafone UK UMTS handset running the Nokia download client and accessing content via a Vodafone link to Jamba!)
- Vodafone live Germany (using a Samsung SGH-ZV30, a Vodafone Germany GPRS handset with access to the Openwave enabled Vodafone Live! Service)
- E-Plus i-mode (using a Mitsubishi M430i GPRS handset with access to the i-mode service)

Researchers attempted to download the following applications for each service:

- one basic ring tone
- one polyphonic ring tone
- one basic game (either Tetris or King Kong)
- one advanced game (either The Sims2 or Asphalt Urban GT2).

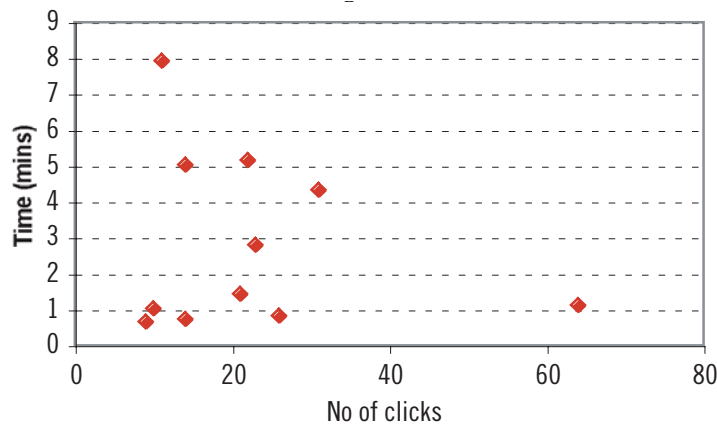
In some cases the services did not differentiate ring tone types, in which case researchers selected the easiest-to-locate alternatives. In one case the operator did not have one specific version of the Asphalt Urban GT2 game desired; in this case the researchers selected the GT alternative.

To minimize the number of keystrokes required, researchers selected the first available product for each category tested and if shopping options were offered, they used the first available submenu. Participants avoided demos and other functions that might require extra steps. For each test, timing and counting of click distance began after the browser was launched. Timing ended when the download was complete.

In the course of the research, a number of points emerged:

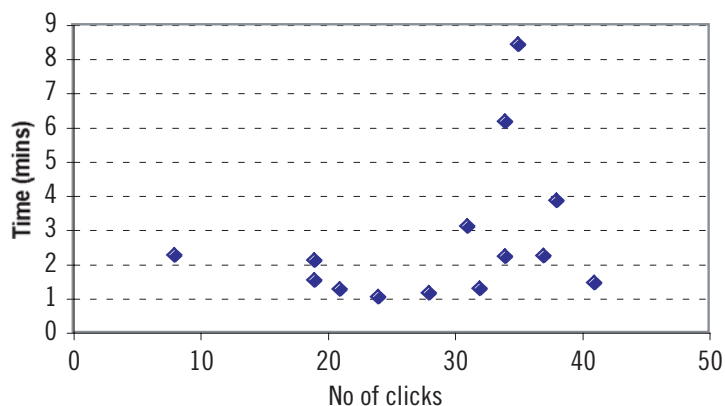
- The click distance involved in finding a specific named item of content was sometimes excessive (between 20 and 30 clicks on average)
- Navigating to a purchase screen was sometimes held up with lengthy explanations of terms and conditions
- Accessing 2.5G portals was not always seamless (in one case the operator’s WAP portal was out of action for a day)

Chart 4: Ringtone downloads



Source: Informa Telecoms & Media

Chart 5: Games downloads



Source: Informa Telecoms & Media

Table 1: Comparison of click distance and time needed

Click distance (no of clicks)	Verizon	Cingular USA	T-Mobile UK	Orange UK	Vodafone Germany	Vodafone Germany	E-Plus	Average
Ringtone a	14	--	9	31	26	--	--	20
Ringtone b	11	23	10	22	64	14	21	24
Game a	8	19	19	35	28	41	24	25
Game b	38	31	21	34	32	34	37	32

Time needed (mins/secs)	Verizon	Cingular USA	T-Mobile UK	Orange UK	Vodafone Germany	Vodafone Germany	E-Plus	Average
Ringtone a	5m02	--	0m40	4m20	0m50	--	--	2m42
Ringtone b	7m56	2m48	1m02	5m10	1m17	0m44	1m26	2m54
Game a	2m15	2m04	1m32	8m25	1m09	1m27	1m02	2m32
Game b	3m51	3m03	1m15	6m10	1m16	2m13	2m14	2m53

Source: Informa Telecoms & Media

4. Improved uptake – assessing the benefits

Mobile content that is designed, marketed and delivered to appeal to carefully defined market segments, and that can be easily discovered and purchased by end-users, should improve data take-up rates and revenues compared to the depersonalized and difficult-to-use services that are available today. If effectively configured and deployed, such services should also enhance the attractiveness of the operator's mobile portal, by providing access to a wider range of appealing content.

Informa Telecoms & Media prepared a model to estimate the impact such a service scenario could have on an operator's revenues.

The model assumes that the following conditions will apply:

- The operator will provide content that will have clear appeal to a range of distinct market segments
- Users will be able to easily opt-in to the service and set up a personal profile governing the terms of the service and applications/areas of interest
- Users will have the assurance that they can opt out at any time without penalty
- Profiled users will be able to discover and purchase content easily (in less than 10 clicks and within 90 seconds)
- The operator will use network and customer intelligence to deliver marketing messages and content only to target customers
- The content will be delivered to the user via the operator’s own portal.

Revenue impact of this approach

Informa Telecoms & Media believes that improved discovery techniques according to these assumptions would improve operator revenues by around \$10 billion cumulatively in Europe and just over \$4 billion in North America over five years, amounting to just under \$14 billion in the two regions combined. These figures are shown in Chart 6 below.

Chart 6: Cumulative operator revenue gain 2005 – 2010 (\$m)



Source: Informa Telecoms & Media

As shown in Tables 2 and 3 below, Informa Telecoms & Media estimated potential increases in mobile entertainment downloads in Europe and North America from 2005 to 2010, covering the ringtones, games, music and personalisation categories. Revenues were calculated for early adopters, youth, and the mass market sectors, making allowance for the slightly earlier adoption of mobile services by the mass market in Europe.

In the ‘no change’ scenario it is assumed that the market conditions outlined earlier will apply. In particular this means discovery of content is accomplished in 10 clicks and within 90 seconds.

Table 2: Mobile entertainment revenues (\$m) 2005 to 2010 - no change scenario

	2005	2006	2007	2008	2009	2010
North America						
Early adopter	609.2	1,003.4	1,254.5	1,654.7	1,760.5	1,766.8
Youth	456.9	752.5	1,075.3	1,418.4	1,760.5	2,120.2
Mass market	456.9	752.5	1,254.5	1,654.7	2,347.4	3,180.2
North America total	1,523.1	2,508.4	3,584.4	4,727.8	5,868.5	7,067.2
Europe						
Early adopter	1,617.7	2,047.9	2,588.4	2,616.1	2,974.9	2,609.9
Youth	2,157.0	2,730.5	3,451.2	3,662.5	4,164.9	4,567.3
Mass market	1,617.7	2,047.9	2,588.4	4,185.7	4,759.9	5,872.2
Europe total	5,392.5	6,826.2	8,628.0	10,464.3	11,899.7	13,049.3

Source: Informa Telecoms & Media

The ‘improved discovery’ scenario assumes that content can be discovered and delivered with 3 clicks or less and with zero or low latency. This is likely to have proportionately more effect on youth and mass market users, leading to higher additional revenues in these sectors.

Table 3: Mobile entertainment revenues (\$m) 2005 to 2010 - improved discovery scenario

	2005	2006	2007	2008	2009	2010
North America						
Early adopter	609.2	1,103.7	1,380.0	1,820.2	1,936.6	1,943.5
Youth	456.9	940.7	1,344.2	1,772.9	2,200.7	2,650.2
Mass market	456.9	903.0	1,505.5	1,985.7	2,816.9	3,816.3
North America total	1,523.1	2,947.4	4,229.6	5,578.9	6,954.1	8,409.9
Europe						
Early adopter	1,617.7	2,252.6	2,847.2	2,877.7	3,272.4	2,870.9
Youth	2,157.0	3,413.1	4,314.0	4,578.1	5,206.1	5,709.1
Mass market	1,617.7	2,457.4	3,106.1	5,022.9	5,711.9	7,046.6
Europe total	5,392.5	8,123.1	10,267.3	12,478.7	14,190.4	15,626.6

Source: Informa Telecoms & Media

About Informa Telecoms & Media

Informa Telecoms & Media is the leading provider of business intelligence and strategic marketing solutions to global telecoms and media markets.

Driven by constant first-hand contact with the industry our 90 analysts and researchers produce a range of intelligence services including news and analytical products, in-depth market reports and datasets focused to technology, strategy and content.

Contact

Richard Jesty
Informa Telecoms & Media
Mortimer House, 37 – 41 Mortimer Street
London W1T 3JH
Direct: +44 20 7017 5550
Email: richard.jesty@informa.com
Web: www.informatm.com

About VOCEL

VOCEL is a mobile technology company focused on driving revenue growth in three key markets: mobile commerce, healthcare, and premium branded content. VOCEL's solutions function on all major platforms and extend to the consumer devices that power today's highly mobile society.

Leveraging its unique patent pending push technology and one-touch purchasing capability, VOCEL has developed a ground-breaking solution to increase revenues for mobile commerce. This technology, known as INCA (Interactive Commerce Accelerator), allows subscribers to easily purchase digital products with just one click.

Contact

VOCEL
13400 Sabre Springs Pkwy
Suite 255
San Diego, CA 92128
Phone :+1 858 679 1919
Email: Support@VOCEL.com
Web:www.VOCEL.com

Sponsored by _____

