AOD – a Next Generation Digital Broadband Service

The traditional advertising media platforms include TV, outdoors, Internet, newspaper, radio, and more. Along with the rollout of IPTV and 3G networks, network carriers and users are expecting new service deployment. Current information technology, network, and market environments are making way for a new advertising model: Advertisement on Demand (AOD). In contrast to rotational advertisement, AOD features interaction, flexibility and focused ads recipients. The AOD is more applicable to communication networks than Video on Demand (VOD) because it has advertisers pay the bills, uses diverse access terminals, and is adaptable to demands of enterprises, businesses, and customers. The AOD is expected to drive telecommunication networks forward and improve the profitability of business of network carriers.

The developing telecommunications network is bringing tremendous changes to daily life. While Public Switched Telephone Network (PSTN) telephony is connecting one household to another, mobile telephony enables people to talk with each other no matter when and where. More amazingly, IP broadband Internet surfing is presenting a brand new „wonderland" where we stroll and shop, dig information, or take adventures that we can otherwise never experience in our real life. The fast growing popularity of Internet applications has been translated into massive market potential and the commercial competition has been scaling up hereby.

The IPTV has become the recent heartthrob in the telecommunications industry. It promises to lead Chinese television viewers, which account for the most of Chinese population, to the next-generation high-speed information telecommunications network through the most acceptable and traditional TV terminals. With IPTV, Chinese people will be exposed to miscellaneous Internet services. Once 3G networks get on the move, the most vibrant consumers in the country will find even more convenience to those services. As opposed to the current telecommunications network that provides communications as a major service for „netizens" only, the to-be-constructed broadband network is destined to become the focus of world attention and contention as well. The telecommunications network is going to offer another significant platform for advertisement in addition to the existing television and newspaper. Besides, the interactive feature of telecommunications networks will make Advertisement on Demand (AOD) a brand-new advertisement model.

1. Existing Advertisement Models

Chinese market is now available with the following advertisement models:

1.1 TV Ads
The mainstream ads model is the TV ads.

This is because TV has the most recipients. TV ads can be sub-classified into two programs:

(1) Sponsorships for
    Variety and Movie Program

A TV station produces variety shows or buys the copyright of TV series and movies and then popularizes them for the sake of increasing audience rating. Business enterprises bid for sponsorship of the programs in return for commercial airtime inserted within the programs.

Nowadays CCTV and Hunan TV are the most successful TV stations for this ads model.

(2) TV Shopping Channels

TV shopping channels have been around for one or two years. It is a new TV ads model that TV stations produce short commercial videos together with business enterprises and air the videos through a TV channel where a host also shows up to promote the products concerned.

Hunan TV has launched „Happy Go" channel since 2006 as the first countrywide chained, live TV-backed modern TV shopping platform with the initial investment of RMB100 million. Hunan TV has had this digital TV shopping channel approved officially and this is so far the first digital TV shopping channel license ever granted by the State Administration of Radio, Film and Television. According to sources, Computer, Communication, and Consumer (3C) combined appliances, digital communications and home supplies are on the „Happy Go" channel. In addition, jewelry and beauty, health and personal care, apparel and accessories, insurance, sports and outdoor living are all to be found on that channel. The concept of „Happy Go" could be easily associated to a retail shopping mall.

1.2 Outdoor Ads
Outdoor ads are mostly seen at office building, business building, public transportation vehicle, subway station, airport, golf course, shopping plaza, KTV, bar and gym clubs.

Successful carriers of outdoor ads in China are Focus Media, Target Media and Framedia. The 3 carriers have now merged to Focus Media whose office/shopping building advertisement is covering 60 000 buildings in 75 cities of China and its daily recipients counting to 100 million urban consumers.

1.3 Internet Ads
Internet ads can be further classified as:

(1) Search Engine Ads

For Google and Baidu users, they input keywords to search the web. Then sponsors information that related with the keywords they just input would be shown, as well as information that directly related to the keywords. Information of the sponsors is listed in the order of the sponsoring price.

Google AdWords also helps users find product/service providers. In this way, product/service providers are able to acquire visitors and/or clients with a much clearer intent and they pay Google AdWords by user clicks at a fixed price, for better efficiency.

(2) Web Page Ads

Web page ads are shown on web pages in texts, images, and Flash formats.

(3) Email Ads

Email ads are sent to inboxes of email addresses and they are usually referred to as „spam".

(4) Others

Ads can also be seen in newspapers, radio programs, short messages and coloring ring back tones.

2. IPTV and 3G Networks. New Advertisement Media Platform

New information broadcast approaches have always been triggering new advertisement models. If we trace along the development of messaging, we see from word-of-mouth marketing to announcements, then to posts, newspaper, radio, movie, television, telephone, and Internet. Advertisements used to be broadcast to passive recipients due to lack of interactive means. Then Internet has made it possible for simple and indirect interactions, for example, information search, ads clicking, ads subscription, and links to ads. However, these approaches are limited in applications and acceptance. Now the presence of IPTV and 3G networks are signifying major reform to present advertisement models.

IPTV features the following to make the telecommunications network a new advertisement media platform:

(1) Broadband to Home

Guarantee of enough bandwidth means satisfactory visual and audio effects that in turn allow effect-sensitive advertisements.

(2) Set Top Box + TV Terminal

The combination welcomes all, senior or toddling. Ease of use of this combination means IPTV users are not necessarily restricted to be computer users, it 磚 open to all TV viewers instead. Convenient TV operation also saves the trouble of computer startup and network access. Watching TV is again always more comfortable than using a computer IPTV makes people transit from TV broadcast networks right into telecommunications networks without difficulty or even being aware of the transition as it helps people inherit the long established consumption habits. As a result, IPTV is able to maintain the attention level of advertisement.

(3) Powerful Media Server and
    Content Distribution Network

The IPTV makes advertisements easy to produce, store and distribute with its powerful media

server, content distribution networks and management technologies.

(4) Powerful Interactive Feature of the Telecommunications Network

The telecommunications network provides voice, text and video instant messaging and even multi-party video communication. It enables other interactive means such as short message, coloring ring-back tone, email, voice inbox, and electronic fax. All these features are useful for efficient and direct post-ads effects and transactions.

The most significant advantage of a 3G network over a 2G or 2.5G one is its larger wireless network bandwidth which is very important for wireless video applications. China is beginning to boasts 400 million mobile users and cell phones have become very popular. Cell phone users are expecting more from this little gadget in their hands. China Mobile claims that mobile TV service is now available across its whole network. Similar to IPTV, 3G network also provides broadband access, and it 磚 ubiquitous mobile access.

The 3G network will also have large number of end users, powerful media server and content distribution network. The 3G network is going to make another focus for advertisers.

Focus Media claims that it is expanding the ads service to cell phones and the ads model and pricing policy are being designed for the moment.

3. The Advertisement on Demand (AOD)

It is time to think, what kind of ads would suit the telecommunications network In what way the advantages of the telecommunications network work the best? What would attract the attention of telecommunications network users?

As far as IPTV is concerned, thanks to the relatively adequate bandwidth resource, original flat monthly rate is still workable and users tune in at relatively invariable place and time. Therefore, ads can be inserted within programs as they used to. While with 3G, because its wireless bandwidth is improved but still limited and precious, rotational ads bombarding would make a „misfit". Besides, users would get online whenever and wherever, instead of at fixed place and time as IPTV.

The AOD is the ads model that suits the interactive and user-defined features of the telecommunications network. It will become an important model just as the Video on Demand (VOD), another major service provided by IPTV.

Most users rather would like to select, control, store, and even participate in video programs, than accept whatever are provided. Telecommunications networks can help users achieve this. With AOD, users are given the initiative to watch ads shows or not. In this case, what business enterprises should do is to tap that initiative and make users happy and willing to view their product advertisements.

AOD features the following:
- It is classified search;
- It focus on users with a clear interest or intent;

- Users are able to customize subscription policy and the network will then send ads to the user automatically;
- It has capability to update ads any time;
- Users can pay per click, which has better cost effect for business enterprises;
- There are ads and instant messaging whenever and wherever, which result in higher transaction efficiency.

3.1 Rotational Ads and AOD

Table 1 gives the pros and cons of rotational ads and AOD in order to give a comparison:

3.2 VOD and AOD

Both VOD and AOD are important applications of IPTV and 3G networks and are the major drives behind the telecommunications industry.

Table 2 shows the comparison between the two services Video products such us movies are copyright protected and their broadcast is restricted. Advertisement is a totally different story. The more people an advertisement is popular with, the happier the advertiser would become. There would be little copyright problems arising. Meanwhile, some well-produced ads have already gained popularity on network.

3.3 Operation Models of AOD

We recommend the following operation models to profit from AOD:
(1) Advertisers enter agreement with Internet Service Providers (ISP) to settle down issues concerning priority level, down payment, and content of an advertisement.
(2) ISP popularizes an advertisement; end users search, select, and subscribe to the advertisement. Advertisers may pay ISP on a traffic basis.
(3) ISP counts the AOD clicks and advertisers monitor the counting.
(4) By month end, ISP and advertiser settle the accounting based on the „AOD clicks weighted ads priority". Telecommunications carriers may obtain a portion of ISP revenue or work as ISP.

3.4 Applications of AOD

Business enterprises, government agencies, and commonweal bodies submit text/audio/video ads to service provider for auditing. The approved

ads will then be stored on AOD servers and popularized by ISPs.

End users may use PC, television, cell phone or touch screen terminals at any network access point to click on the ads to play them. The network access point can be household, public wireline/wireless network terminals, elevator, airport, and more.

An AOD system is available with classifications, search engine, interactive control (fast forwarding and rewind), and links for communication. End users may select to set up communication or send information to specific recipient, that is, cell phone number and email address.

For example, one who needs decoration service may click on ads of decorative material markets and decoration firms for specific information. One who is considering investment on real estate may click on ads of property developers, real estates, and property agents. One who is looking for an automobile model may subscribe to auto ads to keep abreast of special offer and new model information. A restaurant that is opening business may produce its own DV advertisement that includes name, address, feature, target customer and other service information, and submit the ad to ISP for approval and release. One can search for a restaurant at a specified location (such as within 2 km range) with desirable grading and features.

4. Conclusions

The telecommunications network technology is making broadcast and interaction in audio, video image, and streaming formats all the easier. The AOD is now barely out of the gate to respond to end users demand to acquire information rather than accepting whatever prepared for them, and to telecommunications operators demand to provide „killer" applications on broadband Internet and 3G networks.

While VOD has to address copyright and tariff issues and mobile TV has to face up to the wireless bandwidth problem, AOD makes things much easier as it has enterprises pay for the ads broadcast. It also features short multimedia interactions and ubiquitous yet flexible access terminals. With AOD being popular with both advertisers and end users, it will likely become the major stimulus for the development of IPTV and 3G.

Table 1. Comparison between rotational ads and VOD

Pros and Cons	Rotational Ads	AOD
Pros	Ads Bombarding, good brand effect, forceful Acceptance, eye-catching, suitable for Large Enterprise	Interactive, Instant Update, Flexible and Controllable Production Distribution cost, Abundant Content Suitable for Small/Medium Enterprises and Local Business Operations
Cons	High Cost, No Focus Client	No Compulsion

Table 2. Comparison between VOd and AOD

Pros and Cons	VOD	AOD
Pros	More Popular with Entertainment Users	No Copyright Restriction, Payable by Enterprise, Proper Duration for 3G Framework, Low Sensitiveness to Transmission Speed, popular with Enterprise
Cons	Copyright Restriction, Payable by End User, Long Time Consumption, Limited Applications, Sensitive to Transmission Speed	Not Recreational (Good ads content can stimulate forwarding like the case of short messages though.)