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| Source(s) | Jianjun Wu Huawei Technologies Co., Ltd. | Voice: (+86)2150994110 Fax: Email: wujianjun@huawei.com |
| | Yungang Li Huawei Technologies Co., Ltd. | Voice: (+86)2150994110 Fax: Email: liy@huawei.com |
| Re: | MBWA Call for Contributions | |
| Abstract | This presentation addresses some network orientation considerations for MBWA AI design, and pitch 802.20 network to THE UNIFORM NETWORK. | |
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In the future society of information, there will be more information and it will be very convenient to get the information. The basis of realizing this goal is BROAD BAND COMMUNICATION NETWORK. At present, with the development of optical fiber communication technology, on one line it is possible to transit 1000 Gbit/s information current, and it will develop at higher speed. Accordingly, to the operator, the skeleton network technology has met the requirement of social development for the large amount of information. But the bottleneck lies in the Access Network. Therefore, the technological development of Access Network has become the key point of communication circle. Among the Access Network technology of broad band, MBWA system is paid more and more attention, with its obvious advantage of flexibility, convenience, mobility and less investment.

To the operator, the emergence of new technology must take into account its net framework. The forming of one net is very expensive and very slow, after all, it is of large amount investment. The vendor should consider completely the next development of network, avoiding the unnecessary investment or making worthy investment.

From the PAR of 802.20, we can know that the air interface of 802.20 will consider the following factor(refer from C802.20-03/32):

1. The PHY and MAC protocols shall support IP both real-time and non-real-time services, and the associated QoS, according to IETF recommendations.
2. The PHY and MAC protocols shall support both Ipv4 and Ipv6.
3. The PHY and MAC protocols performance shall be maximized to support:
 - a. IP Voice
 - b. Video conference
 - c. Multi-media streaming, both down- link and up-link
 - d. Inter-active services
 - e. Non real-time services
4. The PHY and MAC protocols shall be optimized for statistical traffic multiplexing, in both up-link and down-link
5. For efficient transport of IP voice/video, the MAC protocol shall allow for header compression.
6. The MAC protocols shall support IP multicasting.
7. The PHY and MAC protocols shall optimally transmit variable length IP packets.
8. The PHY and MAC protocols shall permit peak down- link / up-link data rate delivery to / from any subscriber terminal.
9. The PHY and MAC protocols shall provide for multi-rate support.
10. The same PHY protocol shall support both FDD and TDD.

At the same time, it can provide its users with the comprehensive service MBWA of voice, data, video frequency, which meets the tendency of net integrating and also makes the possibility of net integrating .Compared with traditional method of Access Network, it has more flexibility and more service.

Considering the network, we find that these factors have something to do with the current internet, telecom network and mobile network. From the developing view, if some

measures are taken considering completely the future development of net, it will make the protocol more attractive. Because this means that we consider more for the operator, leading the development of them and optimizing sources.

As the technology promotor, According to the 802.20PAR and the current technological systems , judging the developing way of different operators all over the world, it is very necessary for us to consider more while setting the standard, and moreover it will not bring to many changes .But if this scheme is feasible, it must be a great pioneering work.

It is well known to us that the developing process of the three network technology:

- a)Internet network : IPV4? multicast QOS? IPV6? NGI(Next generation internet network)
- b)Telecom network: VoIP? soft switch? NGN (IP-based soft switch network, next generation telecom network)
- c)Mobile network: Analog mobile? 2G(GSM/CDMA)? 3G(WCDMA/CDMA2000)? Beyond 3G ? 4G/OFDMA....

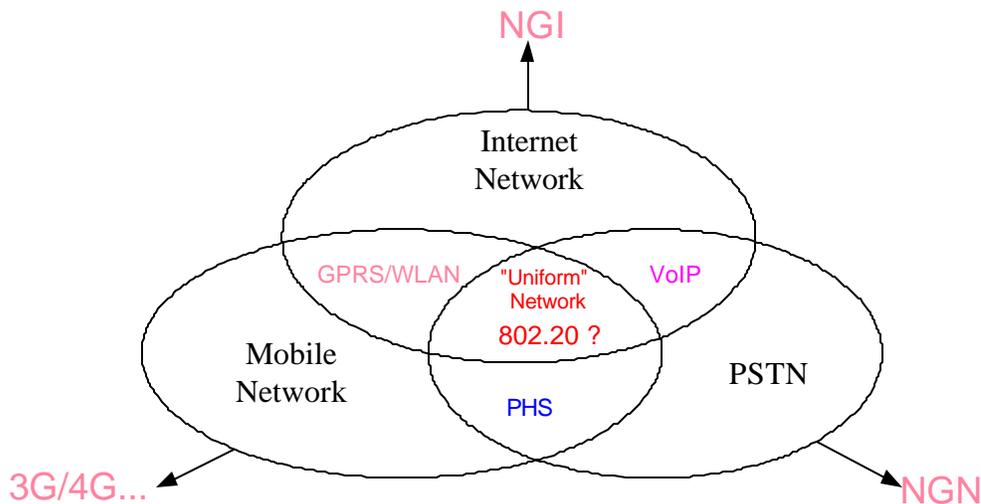


Figure1. the development of network

And from the current situation, we know that :

Superposition between telecomm and mobile network is PHS.

Superposition between Internet and mobile network is GPRS, to Internet, is WLAN.

Superposition between telecomm and Internet network is VoIP.

The converging point of the three networks is THE UNIFORM NETWORK, and THE UNIFORM NETWORK will be the key point of the development of the next generation network, and further integrate soft switch, advanced wireless access technologies and NGN. At the same time, from the network developing angle, we have enough reasons to believe that THE UNIFORM NETWORK will be paid more attention by operator.

Contrast to 802.20 PAR, it is very appropriate and feasible that we pitch 802.20 network to THE UNIFORM NETWORK.