THE ATV-TVB RESPONSE TO

THE ITBB CONSULTATION PAPER ON

DIGITAL TERRESTRIAL BROADCASTING IN HONG KONG

(Issued by the Information Technology and Broadcasting Bureau, 1 December 2000)

Asia Television Limited **Television Broadcasts Limited**

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1. Introduction

1.1. Asia Television Limited (ATV) and Television Broadcasts Limited (TVB) recognise the efforts of Information Technology and Broadcasting Bureau (ITBB) and the Government in trying to infuse new technology in the Hong Kong television market. The *Digital Terrestrial Broadcasting in Hong Kong Consultation Paper* (Consultation Paper) issued on 1 December 2000 by the Information Technology and Broadcasting Bureau (ITBB) was the first formal announcement of detail of Government's intention and proposed direction in the development of digital broadcasting in Hong Kong. As existing free-to-air terrestrial television broadcasters, we, ATV and TVB, would like to respond jointly to the Government's proposals concerning the development of Digital Terrestrial Television (DTT) in Hong Kong outlined in the Consultation Paper. We believe that from the perspective of the terrestrial television industry, with our knowledge and know-how, expertise and experience in terrestrial TV broadcasting, programming, marketing and audience analyses, we would be able to offer constructive and practical comments and suggestions in the interest of the public as well as future DTT industry in Hong Kong.

1.2. Our response would consist of:

- Response on Technical Issues
  - DTT Standard and related issues
  - Feasibility and workability of proposed frequency network
  - Frequency coordination with Mainland authorities
  - Coverage issues
- Response on Policy Objectives
  - Smooth transition from Analogue to Digital TV
  - Consideration for enhanced TV services
  - Fairness to existing terrestrial broadcasters
- Response to other specific legislation, policy, regulation and licensing regime proposals as outlined in the Consultation Paper
- Conclusion and Suggestions for options other than those proposed in the Consultation Paper; and
- A summary of our response to key DTT proposals in the appendix.

2. Industry's Response to Technical Issues

2.1. **The whole premise for the proposed DTT legislation, policy and licensing regime outlined in the Consultation Paper hinges on whether the proposed availability of frequencies and network plan are feasible and workable.**

2.2. We strongly believe that there are three major inter-related technical issues that would dictate the success or failure of the future DTT industry in Hong Kong:

- The **DTT Technical Standard and Compatibility with that of the Mainland's**
- **Frequency Plan Coordination with Mainland authorities**
- **The feasibility and workability of the proposed frequency network plan**, in terms of **field strength of transposers, area coverage** and **interference**

2.3. **Technical Standard**

Which DTT technical standard to adopt would not only have its broadcast engineering implications, such as the network capacity, service quality and applications, etc., it would also have market and consumer implications. **We believe that for Hong Kong to decide on a DTT technical standard without knowing what the Mainland would use would curb the chance of success of the DTT industry in Hong Kong.**

From May 1999 to early 2000, ATV and TVB had participated in the Government-Industry steered technical trials of the three prevailing DTT standards, viz. Integrated Digital Broadcasting - Terrestrial (ISDB-T) of Japan, Digital Video Broadcasting - Terrestrial (DVB-T) of Europe and Advanced Television Systems Committee (ATSC) of the United States.

We are fully aware of the merits and demerits of the different standards and that the proposed DVB-T standard (4.12 of the Consultation Paper) has its advantages in mobile application and single frequency networks. The Dolby AC-3 sound system, used as part of the ATSC standard, would be suitable for

the DVB-T standard as well. Thus far, the combination of DVB-T and Dolby AC-3 would be similar to only the Australian system which had just been launched in January 2001.

However, **we believe that technical compatibility between Hong Kong and the Mainland would be essential to the success of the DTT industry in Hong Kong:**

- **To have the same technical standard as our neighbours would make it easier to control and minimise interference, a technical advantage reiterated by foreign experts at the Broadcasting Authority (BA) and Office of the Telecommunications Authority (OFTA) Symposium on "Digital Broadcasting & Convergence" (15 February, 2001).**
- **If Hong Kong adopts the Mainland's standard, it would not only benefit the DTT industry in Hong Kong but also the consumers, since DTT-related consumer products produced for the vast market of the Mainland and Hong Kong would be much less expensive than those produced specially for one small market of Hong Kong.**
- **In turn, lower costs for Set Top Boxes (STBs) and Integrated Digital TV Sets (idTV) would enable a faster transition from Analogue to Digital TV and recovery of Analogue spectrums.**

Although there had not been official announcement of when the Mainland would decide which system the country would adopt or when it would start its DTT transmission, Chinese experts have been studying the three existing DTT standards with a view to developing a better system, taking into consideration of the shortcomings of each. They are working towards conducting technical trials of several modified and/or new systems as well as the prevailing three later this year. At the international "Broadcast Industry Development Strategy Forum of BIRTV 2000," last August, Mr. Zhang Haitao, Vice Minister, the State Administration of Radio, Film & TV, said the country aim at announcing decisions on technical standard and implementation in 2003. We believe that it is better for Hong Kong to wait for and have the benefit of evaluating the better system, than chance it with incompatibility and interference problems.

Therefore**,** our **response to the proposals on DTT Standard** (Paragraphs 2.1 & 2.2 in the Consultation Paper) **is:** ***We strongly urge the Government to wait until the Mainland's improved DTT standard is known before making the decision on which DTT standard and sound system to adopt. If the Mainland's adopted standard is better, from a technical and economical point of view, Hong Kong should adopt the same DTT and sound standard.***

2.4. **Frequency Coordination with Neighbouring Mainland Cities and Provinces**

We believe that frequency plan and implementation coordination with Guangdong, Shenzhen, Macau and the Pearl River Delta cities and provinces are essential and vital to determine whether the final DTT frequency plans are workable.

We fully understand the complex process involved. In fact, the DTT standard and Frequency Plan Coordination are inter-related issues. We are most concerned about the interference problems which would affect TV reception which might enrage the public at large.

Although the Office of The Telecommunications Authority (OFTA) is to liaise with Mainland authorities, ***the Government should work closely with existing terrestrial broadcasters, ATV and TVB, in the coordination planning with neighbouring Chinese cities and provinces.*** *Both ATV and TVB have engineers who have been working in terrestrial TV broadcast for many years. We know the Hong Kong landscape and are fluent with coverage and interference issues involved. We would be willing to offer our expertise and advice to contribute to building a feasible DTT network plan for Hong Kong and success of the future industry.*

2.5. **Coverage Issue**

For example, from the Summary Report of the P. A. Consultant Study, we considered the field strength of proposed low-power transposers too weak. **We worry that such signals would literally be drowned by signals from our neighbouring cities. That means we might not even have a DTT industry.** That is why coordination with the Guangdong, Shenzhen, Macau

and Pearl River Delta cities and provinces is so important, and that local expertise would be so essential in mapping out a realisable DTT network and frequency plan for Hong Kong.

2.6. **Concern Over the P.A. Consultant "DTT Frequency Planning Study"**

Since the frequency network plan proposed in the Consultation Paper was based on the P.A. Consultant "DTT Frequency Planning Study" commissioned by OFTA, we had studied the summary report (obtained from the OFTA website) carefully to assess its feasibility and workability. However, after calculating and projecting the frequency network coverage and interference with existing analogue frequencies using information from the summary report, we found discrepancies in what the proposed network plan could achieve. We believe that it is of vital importance that the two stations should study the full technical report of the P.A. Consultant Study to have a fair assessment of what had been proposed. We had written to ITTB to request for a full technical report of the P.A. Consultant Study listing information necessary for our assessment on 17 January 2001. Regrettably, we received a reply from ITBB on 15 February, denying our request because it contained information provided to OFTA by other authorities. Since the P.A. Consultant Study was only part of the overall programme being mapped out by OFTA for the implementation of DTT in Hong Kong, we are still concerned about:

- Whether there would be interference on existing analogue terrestrial TV services;
- Whether the plan is practical and would work; and
- Whether this model, which seems to be that of the UK, with the difference in the concentration of high-rise buildings, landscape and terrain, would be best for Hong Kong.

We strongly believe that careful and meticulous frequency planning is fundamental for the future DTT industry to succeed.

We would comment on the proposed frequency plan if the Government would provide technical details requested, short of the full technical report of the P.A. Consultant Study, and allow a few months for us to

respond. We would also welcome consultation in any stage of the Government's frequency coordination and planning for Hong Kong and with Mainland authorities.

3. Industry's Response to Policy Objectives

3.1. We would like to question the Government on:

- ***Why must Hong Kong establish its DTT standard while the country, Mainland China is actively developing an improved standard and is about to finalise its plans?***
- ***What is the rush? Why should the DTT broadcast start in late 2002 or early 2003? Is there any real advantage for potential investors? For the Consumer? For the market or Hong Kong's Economy?***

We believe that to rush ahead and start DTT transmission a year or so earlier would not contribute much to the Government's objective "to enhance Hong Kong's position as a pre-eminent regional broadcasting hub." In the case of the worst scenario if not enough policy and practical consideration had been given to the technical standard adopted by the Mainland, and frequency coordination with Mainland authorities, STBs and idTV were expensive and uptake from consumers were slow and interference on existing analogue service provoked public outcry, we might even experience a setback.

3.2. **Smooth Transition from Analogue to Digital TV**

For the DTT industry to succeed, Hong Kong would not only need a meticulous frequency plan, shrewd market planning and consumer adoption of the new technology, but also a headstart with smooth transition from analogue to digital TV.

We believe the ***Government should place Smooth and Orderly Transition from Analogue to Digital TV as the first priority in formulating DTT policies.***

Therefore, besides facilitating analogue and digital simulcast, ***frequencies used by existing Analogue free TV services should have as little change as possible during the simulcast period*.**

The people of Hong Kong rely heavily on the existing analogue free TV for information as well as free entertainment. Free TV is also an integral part of the emergency information system in Hong Kong, from which e.g. news on typhoon signals and storm warnings, etc., are relayed to the public almost

instantaneously. In the interest of the public, the new digital frequency plan must cause the least interference and disruption to the existing analogue free TV service.

Therefore, we urge that the Government must consult and reach an agreement with us, ATV and TVB, the existing analogue free TV broadcasters, before making any decisions on the new DTT frequency plan that would change or have a possible effect on existing analogue frequencies.

If the Government were to go ahead with deploying the proposed Multiple Frequency Networks (MFNs) during the analogue-digital simulcast period, some of the existing analogue transposers need to be switched off to free-up the frequencies for the MFN multiplexes. This would definitely cause disruption to the viewing public and would affect a smooth transition. It is therefore the industry's view that MFN should not be deployed at the initial stage.

3.3. **Quality Signals and Coverage of Digital Networks**

Smooth transition also means that the digital transmission during simulcast should be of the best quality and coverage and the multiplexes carrying the digital version of the simulcast should have territory-wide and quality coverage. Therefore, ***the Government should allow adequate frequency capacity to ensure quality and territory-wide coverage of the digital simulcast as well as other digital services. Government should have these objectives in mind when they design the network plan and assignment and allocation of frequencies.***

3.4. **Consideration for Enhanced Services**

To create as many multiplexes as possible and to open-up the terrestrial TV market merely for as many Standard Definition TV (SDTV) services as possible is not the best way to utilise the DTT spectrum and technology. *Therefore, we believe that to enable Hong Kong viewers to have* ***quality/ enhanced TV services offered by the DTT technology should be a policy consideration***.

With the existing analogue picture quality, the audio and visual quality of a programme in Standard Definition TV (SDTV) transmitted in digital will not be

much better than that transmitted in analogue format. In order for the public to really appreciate the difference and adopt the new technology, we would need a quantum leap, such as value-added content-enriched TV services, e.g. interactivity, data-link, High Definition TV (HDTV), portable and mobile reception etc. to create the desire and demand to adopt the new technology and encourage the public's willingness to spend more to receive HDTV or the enhanced TV services.

Simply adding more channels of SDTV would not be the most efficient nor effective way to use the terrestrial spectrum. (Cable or satellite are better for the delivery of quantity/vast number of channels.)

3.5. **A Fair Playing Field**

The Government had proposed that ATV and TVB should simulcast in analogue and digital format to ease in the transition process. We have been placed in an unequal footing when compared to new DTT programme providers as:

- We had to invest on digital TV with added costs for the simulcast in analogue;
- Our digital service would be preallocated to Multiple Frequency Network (MFN) multiplexes which would not have a territory-wide coverage. Furthermore, **this mandate would be against the market-led principle and an infringement on the broadcaster/programme providers' basic right to choose which transmission service/multiplex to use for carrying their signals/programmes.**
- The free "must carry" slot capacity of 50% would just be enough to simulcast existing analogue programmes in SDTV, i.e. just duplicating programmes offered in analogue, and would not have enough capacity to offer any enhanced services, e.g. HDTV would need one multiplex for each existing channel;
- WHILE NEWCOMERS COULD OFFER COMPLETELY NEW SERVICES WHICH COULD HAVE ALL THE ENHANCED FEATURES.

We urge the Government to be fair in setting up policy and licensing requirements for the different types of licenses involved, to maintain a fair playing field and to place existing broadcasters on a equal footing with new programme providers on the digital platform. After all, we are new players in the field of DTT as well.

3.6. ***We suggest that the Government should set up a Government-Industry "Analogue-Digital Transition Advisory Committee" to oversee the smooth transition from Analogue to Digital TV and coordinate the public information campaigns. The Committee would also keep track of progress of the Frequency Plan Coordination with Mainland authorities and facilitate consultation with existing broadcasters on proposed plans which would affect existing analogue frequencies. Since the two existing free-to-air terrestrial broadcasters have the obligation to provide territory coverage of their service, any change in the frequencies allocated to them must have their prior consent and no such change should be made if they would in any case result in degradation in the quality of existing signals.***

4. Industry's Response to Other Specific Proposals as Outlined in The Consultation Paper

4.1. The proposed frequency network plan would create **inequality in coverage, service and business potentials between Single Frequency Network (SFN) and Multiple Frequency Network (MFN) multiplexes**, since MFNs would not be able to achieve territory-wide coverage (4.7 in the Consultation Paper). That means we might need to transmit via different networks if they were to achieve territory-wide coverage adding more to the operating costs, a UK model and might not be the most efficient model.

If MFN multiplex operators were also to bear the costs to provide service to viewers affected by the switched-off analogue transposers, *Who would apply and invest in the lesser-prospects, more costly MFNs?*

4.2. **We have grave reservations about using Ch 35 & 37 for DTT**, feasibility and cost study should be conducted in order to assess the implementation method, manpower and costs required "to encourage" VCR users to use their AV connection instead of RF. Since there would be technical difficulties involved and some existing older model TV receivers might not have AV input/output, *who is to bear the cost and deal with the public's complaints? In Japan, the Government had set out a fund for the smooth transition from Analogue to Digital broadcasting, would the Government be prepared to do the same? (4.9)*

*O*ur **response to proposal 2.4 is: *Instead of requiring multiplex licensees to encourage VCR users to make use of the audio-visual input/output to replace the RF connection, Government should take up this responsibility.***

4.3. *The Government need to be very careful in its interoperable criteria for licensing and regulating STBs and integrated idTVs.* To standardise STBs, especially those for conditional access, is an extremely time-consuming and laborious process. *The Government should take care so that they would not regulate to the extent that content providers were unable to launch their services or they would be put out of business. (4.20)*

Therefore, our **response to proposal 2.5 is: *We have no objection to***

licensing and regulating STBs and idTVs under the Telecommunication Ordinance. However, the Government should be very careful in setting up criteria for licensing and regulating STBs and idTVs. We welcome the Government's proposal that OFTA would conduct a separate consultation with the industry.

4.4. To the **proposal 2.6, we *agree that HDTV and mobile reception should not be made mandatory for ALL multiplex operators. However, for the operators carrying the four existing terrestrial channels, adequate provision must be made to enable existing terrestrial broadcasters to offer HDTV, mobile reception and/or other forms of enhanced TV services.*** While High-definition Television (HDTV) and Mobile Reception should not be mandatory at the initial stage, applications with HDTV and Mobile Applications in their business plans should not be penalised. **After all, we believe that the driving force for early take up of DTT would be the value-added experience of enhanced TV.**

Also, Government should also bear in mind that once the multiplexes had been parcelled out to many different providers, it would be difficult or even impossible to adopt HDTV which would need one multiplex for one HDTV channel, such as the case in the UK. *(4.22)*

4.5. *The Government should make clear what short, medium and long-term plan they have in mind so that the industry and market could respond and react sensibly and realistically*.

4.6. ***We agree in principle to the proposal that the four existing terrestrial channel services should be simulcast in analogue and digital format*** **(proposal 2.7).** *However, what kind of Licenses were the Government prepared to grant to ATV and TVB, the existing terrestrial broadcasters?*

To facilitate a smooth transition, Government should give priority to applications or even consider granting a combined transmission multiplex and programme provider license for each of the existing analogue free TV broadcasters, ATV and TVB.

4.7. As to the proposal (the **second part of proposal 2.7**), ***WE ABSOLUTELY DO NOT AGREE that the multiplex operators carrying the simulcast***

***digital signals should be obliged to promote the take-up rate of DTT as proposed because**:*

- The requirement is commercially unfair when compared with other multiplex operators;
- It would not make sense commercially for these multiplex operators to subsidise their competitors since they might have to supply/subsidise non-exclusive access devices such as STBs and idTVs
- It would be commercially onerous and rendered the multiplexes concerned unattractive to any potential applicants; and
- In the event that no one applied for the concerned multiplex, digital simulcast of the existing analogue channels could not be materialised.

What kind of investor would consider such a business venture? What kind of fees would such operators charge -- to consumers/viewers since under 7.7, if the multiplex operator were to provide 50% capacity as the guaranteed slot to existing programme providers free of charge until the Analogue service is switched off? If the multiplex operators were to charge viewers, it would seem unfair for ATV and TVB to provide their signals to the operators free of charge. Is the Government expecting existing free-to-air terrestrial licensees to operate such multiplexes and bear these costs? If so, it would be extremely unfair, since new operators of other complexes would not have to bear such costs.

4.8. **Our response to proposal 2.8 is:** While we **agree and welcome a review and timetable for a switch-off date for Analogue TV service** (paragraph 4.24 & 5.7), ***we urge the government to plan ahead as to what would follow afterwards.***

***If it is completely market-led and commercial reasons driven, the Hong Kong public should be prepared that eventually, there might not be any free TV in Hong Kong**, especially if the approach for separate licensing had been adopted and the layers of fees incurred.*

4.9. Our **response to Proposal 2.9 on licensing approach and regime is:** ***We have no fundamental objection to the principle of separate licensing.***

However, we firmly believe that separate licensing would only be commercially viable if the following critical environmental factors are known:

- The switch off date of analogue services and
- The available spectrum and the number of multiplexes available for licensing after analogue services had been switched off.

We propose: Before fulfilment of the above, combined licensing should be used (Option 1 paragraph 5.5). *. If Government insists on forging ahead with the proposed frequency plan and licensing regime, we suggest* ***a combination -- combined licences for existing terrestrial broadcasters and separate licences for new players. Combined licences for existing terrestrial broadcasters would be more practical and efficient*****.** It would also be an incentive for us to invest in the additional DTT infrastructure.

4.10. If the Government were to promote diversification and choice in TV programmes and services, satellite or cable services would better suit the cause. *If the Government were to encourage investment, technology transfer, innovation and quality programme services to the community of Hong Kong, HDTV, mobile applications and other enhanced value-added services should be encouraged. Quality DTT, i.e. enriched TV experience, should take precedent over the number of standard definition (SDTV) channels/content providers.*

In the case of DTT, (5.7 (d)) widest choice/more programme channels occupying less frequencies, would be a contradiction to quality programme service, such as HDTV, interactive, data link and other enhanced programme services which would require much more frequency allocation.

4.11. We *caution the Government to consider Hong Kong's unique market situation in setting up application criteria for ALL Types of Licenses proposed. After all, Hong Kong is a relatively small market -- with at the most 2.2 million TV households by 2003 and would still be less than 3 million in 2010. Further consultation with the Industry should be conducted once the details and requirements of licences' application criteria had been drafted.*

4.12. Multiplex Licences and Television Programme Service Licences

The government should reach an agreement with Mainland Authorities on a Frequency Plan and conduct further study on available frequency and network coverage plan proposed before inviting applications for all DTT licences.

Our response to Proposal 2.10 is: ***We agree with the principle that a set of extensive criteria should be adopted to assess applications for multiplex licences.***

However, ***we disagree with some of the proposed criteria outlined*** *(6.2)* ***because we believe that some of them are not workable*****:**

- (2) It is unfair to require multiplex operators to commit to how much they would invest and be responsible in encouraging the early take-up of set-top boxes or digital receivers, especially when the Government had proposed that these are open access (interoperable) devices. To encourage early take-up rate of STBs and idTVs should be a Government-Industry joint effort.
- (3) Unless it is a combined licence, the multiplex operator would not have a realistic proposed arrangement for the line-up of services to be carried on the multiplex since at the time of the application, the Government might not have granted licences for programme providers and additional services, and what kind of services and the number of players in the field would still be unknown.

4.13. ***We disagree with the proposal, 2.12, to limit the number of multiplexes a licensee could operate, taking into account of the long-term nature of the investment and licensing period (15 years as proposed in paragraph 6.3). While the number of available multiplexes might be limited during the simulcast period, the number of multiplexes would increase in post analogue days which could be 5-7 years into the licence period.***

4.14. **As to Proposal 2.13,** ***we agree, except for the latter part of point (d) to fulfil "the proposed arrangement for the line-up of services as contained in the application," since it would be out of the multiplex operator's control because the multiplex operator is only a service carrier under the separate licensing regime.***

4.15. **To Proposal 2.14,** ***we agree to limiting programme provider licences to "domestic" television services during simulcast period (6.7). However, we propose that priority should be given to "free" domestic television services and allow adequate spectrum provision for free domestic enhanced TV services given the limited DTT spectrum capacity during the simulcast period; and, there are other platforms, e.g. cable and satellite, that could better serve the pay players, with the capacity for a vast number of channels and service.***

4.16. *We agree to proposal 2.15 that licence conditions for DTT TV programme service providers should be similar to the general conditions in the existing TV services, free or pay.*

4.17. *We also have no objection to Proposal 2.16 that subject to spectrum or other physical constraints there should be no ceiling to the number of programme provider licenses.*

4.18. ***We disagree with Proposal 2.17 (6.9) that no more than one multiplex for each programme provider licensee, because the capacity simply would not be adequate if existing terrestrial broadcasters were to offer HDTV services, even with one whole multiplex and the 50% guaranteed slot on another multiplex for digital simulcast for each. The ratio would be one multiplex for one HDTV channel -- that means ATV and TVB need 2 multiplexes each to offer HDTV for each of the existing channels.***

4.19. Additional service Licences (6.12) ***We disagree with Proposal 2.19. There should not be a ceiling for additional services of any multiplex since if the Government believe that the industry should be market-led and to utilise the DTT technology to its advantages.***

4.20. Electronic Programme Guide Services (EPG) (6.14) **In response to Proposal 2.20:** ***We found the Government's proposal unclear as to what would be considered anti-competitive as the Government had spelt out the promotional function of the EPG (6.13). We believe that programme service providers should be free to provide their own exclusive EPGs since the EPG is a fundamental promotional tool in the digital TV era akin to the on-air promotion in analogue TV.***

We caution the Government to take special care in regulating EPGs, since it would be part of the overall programme promotion scheme as well as programme guide for viewers. The level of EPGs and links would depend on the business model and plan of multiplex operators, programme and additional services providers. If the EPG is part of a particular multiplex's or channel's navigating tool and programme line-up information guide, its content should be relevant to the same multiplex's or channel's.

4.21. **No matter what you could promise with the new DTT scheme, it would defeat the purpose if the general public cannot receive their free TV programmes and viewing is disrupted by interference frequently.**
Again, would the Government be prepared to deal with public complaints? Were the multiplex operators expected to provide the manpower and bear the costs for the transition? Would the burden eventually go back to the existing free TV broadcasters? Or, would the Government consider setting aside funds for information and education campaigns and engineering teams to help the public retune their TV receivers and Video Cassette Recorders (VCRs), reset their aerials etc., to cope with changes of channel frequencies?
Again we urge the Government to set up a Government-Industry Advisory Committee to steer the transition from Analogue to Digital Terrestrial TV.

4.22. ***We urge the government to let the existing terrestrial broadcasters continue to operate with both transmission multiplex and programme provider licences****, even though the Government had proposed to adopt option 2. (7.1 & 7.2)*

4.23. If the Government were to insist to adopt Option 2 (7.4), to reserve two guaranteed slots on two different multiplexes for the carriage of existing channels' digital services:

The 50% allocation (7.7) simply would not be enough if we each were to operate our two existing Chinese and English Channels and to provide content-enriched and/or HDTV services for our digital broadcasts.

4.24. ***We agree to the proposal of guaranteed slots in Proposal 2.21, BUT we found the pre-allocation to MFNs (7.7) which could not achieve territory-***

wide coverage MOST UNACCEPTABLE*, since viewers not covered by these MFNs would be deprived of the benefit of our DTT services.*

Instead of mandating the carriage on MFNs, we should be given the option to choose to be carried on the SFNs under the current proposed frequency plan or a multiplex that would have territory-wide coverage when the frequency plan is finalised after coordination with the Mainland had been achieved.

Again, with the inequality in service and operating costs, there might be no applicants for the MFNs. Is the Government expecting existing terrestrial broadcasters to apply for them so as to continue their services?

If so, it would be extremely unfair when SFN multiplex operators and programme providers do not have to simulcast and would not have to bear such extra start-up costs as providing STBs to viewers affected by the switched off transposers .

4.25. ***We agree to the "free must Carry" principle, in Proposal 2.22, provided that the multiplex licensees concerned do not charge viewers any fees.***

4.26. *We also agree to Proposal 2.23, to simulcast all analogue programme hours in digital format.*

4.27. Again **we urge the** ***Government to defer the invitation for application for all types of DTT licences after further feasibility study of frequency plans, coordination with Mainland authorities and when we have a clear idea of which technical standard the country would adopt***.

Therefore, in response to Proposal 2.24: We believe that the commencing date for licensing is impractical and should be postponed until after the expected improved Chinese DTT standard could be evaluated and when frequency plan coordination with Mainland authorities had reached a stage that a workable frequency network plan for Hong Kong had been finalised. Therefore, the target date for commencing digital terrestrial television should be postponed to end of 2003 or early 2004.

5. Conclusions and Suggestions

5.1. For Hong Kong to decide on a DTT standard without knowing what the Mainland would adopt would not be the best for the consumer nor the industry.

5.2. Frequency Plan Coordination with Mainland authorities would be vital in deciding what frequencies are available and how many digital transmission multiplexes could be deployed during the analogue-digital simulcast period and after the simulcast is switched off. Frequency Coordination would also enable Hong Kong to take measures in avoiding and minimising interference.

5.3. To roll-out as many multiplexes that could be squeezed at the initial stage of DTT transmission, as proposed in the Consultation Paper, would not only be impractical and have little market sense, but would also cause disturbance or disruption of reception of existing free terrestrial TV which would be of great disservice to the people of Hong Kong.
Who is to bear the cost to enable TV reception for affected viewers of switched-off transposers and deal with viewers complaints? The Government? The licensee? Which licensee? The MFN multiplexes' operators? The programme providers? Or the additional services providers?

5.4. The Government should set their priority in introducing DTT in Hong Kong.

5.5. Instead of the rush for as many services as possible, the Government should take a more practical approach and give priority to the smooth, orderly transition from analogue to digital transmission.

5.6. A fundamental principle to enable smooth transition would be: There should be as little change to existing analogue frequencies as possible.

5.7. There are many other platforms/transmission technology much better in delivering quantity, i.e. satellite, cable, etc.

5.8. Government should give more incentive to move viewers to make the switch from analogue to digital, to create the demand and willingness to spend to receive digital television. The way would be through quality/value-added service instead of mere quantity/the number of channels.

5.9. We believe that it would be the enhanced viewing experience via free TV -- the quality of HDTV pictures, the interactive, content-enriched and information links and mobile reception enabled by digital TV -- that would entice the people of Hong Kong to adopt the new technology.

Therefore, we have the following suggestions/alternative proposals:

5.10. *The Government should* ***wait until the Mainland has decided on the country's DTT standard and sound system before deciding on which technical standard to adopt***.

5.11. *The Government should* ***finalise the Frequency Coordination, work out a workable frequency plan and have a clear knowledge of how much capacity are available before setting up criteria and inviting applications for Multiplex, Programme Provider and Additional Services Licences***

5.12. *The Government should* ***make the smooth and orderly transition from Analogue to Digital a priority and prerequisite in formulating DTT policies.***

5.13. *The Government should* ***ensure that as little change to frequencies currently used by existing free TV services as possible in the interest of the public.***

5.14. *The Government should* ***deploy only SFN multiplexes in the initial stage****.*

5.15. *The Government should* ***restrict DTT to domestic free services during the initial stage -- with existing broadcasters simulcast in analogue and digital formats to ensure smooth transmission.***

5.16. *The Government should* ***consider a combination of combined and separate licences in the licensing approach -- combined transmission/ multiplex and programme provider licences for, the existing analogue broadcasters, ATV and TVB, and separate licences for new applicants.***

5.17. *The Government should* ***entice the public to adopt DTT with enhanced features of free digital television by allowing enough spectrum for existing free terrestrial TV broadcasters to provide HDTV or other enhanced TV services.*** *Spare capacity might be used by other content providers, i.e. programme or additional services providers, at an agreeable*

cost and according to market needs and demand. Therefore, though the proposed licensing criteria did not mandate HDTV nor mobile reception, applicants or operators who include these enhanced services in their roll-out plan should not be penalised.

5.18. *The Government should* ***recover the spectrums first. When analogue transmission had been switched off, then deploy more frequencies for additional multiplexes of SFN or MFN and allowing more capacity for programme providers and additional services.***

5.19. **If Government insist on going ahead with deploying all SFNs and MFNs as planned and at the same time,** ***The Government should give priority to ATV and TVB, the existing terrestrial broadcasters, if they were to apply for SFN multiplex licences. Also, ATV and TVB should have the option to choose to carry their simulcast digital signals on their own SFN multiplexes***

5.20. *Government should* ***set up a Government-Industry Advisory Committee to steer the smooth transition from Analogue to Digital TV and oversee Frequency Coordination Planning with Mainland Authorities.***

5.21. *The Government should* ***formulate policy guidelines for the efficient use of Hong Kong's scarce commodity -- terrestrial frequencies, especially what the government would intend to do with the spectrums once analogue had been switched off.*** Such information would be essential before any potential operator of DTT network multiplexes could plan for and commit to such major infrastructure investments.

5.22. **In conclusion, we would like to caution the Government to balance the interest of the public and market-led philosophy in formulating policies concerning the DTT, and in a broader sense, digital broadcasting development in Hong Kong.**

We believe that the Government is earnest in its consultation process and keen on developing a robust DTT industry for Hong Kong. **ATV and TVB would like to offer our experience and expertise and contribute to the success of the new DTT industry.**

We welcome the Government's consultation and would do our best in

providing constructive comments and practical advice at any stage of the Government's DTT frequency planning, coordination and policy formation.

Appendix: Summary of Industry's Response to Key DTT Proposals

For ease of reference, responses to key DTT proposals as outlined in Chapter 2 of the Consultation Paper are summarised as follows: --

Government Proposals		Industry's Response
2.1	To invite views from the industry and the Community on the proposal to adopt Digital Video Broadcasting-Terrestrial (DVB-T) as the DTT standard for the Hong Kong environment (paragraph 4.12).	We strongly urge the Government to wait until the Mainland's improved DTT standard is known. If the Mainland's adopted standard is better, from a technical and economical point of view, Hong Kong should adopt the same DTT and sound standard.
2.2	To invite views from the industry and the community on the proposal to adopt Dolby AC-3 as the sound system for the DVB-T standard in Hong Kong (paragraph 4.17).	
2.3	Unlike Single Frequency Network Multiplexes, the Multiple Frequency Network multiplexes should not be mandated to achieve territory-wide coverage to avoid possible disruption to existing analogue TV services (paragraph 4.7).	We do not agree with the proposed frequency plan; and we do not think the proposed frequency plan is technically and economically viable. However, if the Government decides to press ahead, we agree with the fundamental principle that Multiple Frequency Networks (MFN) multiplexes should not be mandated to achieve territory-wide coverage TO AVOID POSSIBLE DISRUPTION TO EXISTING ANALOGUE TV SERVICES.
2.4	To require multiplex licensees to encourage video cassette recorder (VCR) users to make use of the audio-visual input/output to replace the radio-frequency (RF) Connection (paragraph 4.9)	Government should consider taking up the responsibility of encouraging VCR users to make use of the audio-visual input/output to replace the RF connection.
2.5	To license and regulate set-top boxes and integrated TVs in relation to conditional access systems under the Telecommunications Ordinance (Cap. 106) (paragraph 4.20).	We have no objection as to the licensing and regulating of set-top boxes (STBs) and integrated TV (idTVs) under the Telecom-munications Ordinance. However, The Government need to be very careful in setting up the interoperable criteria for licensing and regulating STBs and idTVs. We welcome the Government's proposal that OFTA would conduct a separate consultation with the industry.

2.6	High-definition television and mobile reception should not be made mandatory at the initial stage of implementation of DTT so as to allow more operational flexibility for multi-plex operators (paragraph 4.22).	We agree that HDTV and mobile reception should not be made mandatory for ALL multiplex operators. However, for the multiplex operators carrying the four existing terrestrial channels, adequate provision must be made to enable existing terrestrial broadcasters to offer HDTV and/or other forms of enhanced TV services (of which mobile reception is one of them) in their digital broadcast. We believe that the most effective way to encourage rapid adoption of DTT in Hong Kong would be through HDTV and other value-added enhanced TV services, and not merely more Standard Definition Television (SDTV) services.
2.7	To simulcast the existing four terrestrial television programme service channels in analogue and digital format. The concerned multiplex operators should be obliged to promote the take-up rate of digital terrestrial television so that the frequency spectrum currently used for analogue broadcast could be released as soon as possible (paragraph 4.23).	We agree that the four existing terrestrial channel services should be simulcast in analogue and digital format. However, WE ABSOLUTELY DO NOT AGREE that the multiplex operators carrying the simulcast digital signals should be obliged to promote the take-up rate of DTT as proposed because: (1) The requirement is commercially unfair when compared with other multiplex operators; (2) It would not make sense commercially for these multiplex operators to subsidise their competitors since they might have to supply/subsidise non-exclusive access STBs (as proposed) or idTVs; (3) It would be commercially onerous and rendered the multiplexes concerned unattractive to any potential applicants; and (4) If so, the existing four channel services will not be simulcast.
2.8	To conduct a review in 5 years following commencement of simulcast or when the penetration of digital terrestrial television reaches 50% of all television households, whichever is the earlier, whether and when a switch-off date should be set for analogue broadcast (paragraph 4.24).	We agree.

2.9	To adopt "separate licensing" approach for the three kinds of services in relation to DTT, viz. multiplex operator, programme service provider and additional service provider (paragraph 5.7).	We have no fundamental objection to the principle of "separate licensing." However, we firmly believe that separate licensing would only be commercially viable if the following critical environmental factors are known: (1) The switch-off date of analogue services; (2) The available spectrum and the number of multiplexes available for licensing after analogue services had been switched off. *We propose that combined licensing (option 1, paragraph 5.5) should be used before the fulfilment of the above conditions.* If the Government insists on forging ahead with the proposed frequency plan and licensing regime, we suggest combined licensing for existing terrestrial broadcasters and separate licensing for new players.
2.10	To adopt a set of extensive criteria to assess applications for multiplex licences (paragraph 6.2).	We agree with the principle that a set of extensive criteria should be adopted to assess applications for multiplex licences. However, we disagree with some of the proposed criteria outlined (paragraph 6.2) because we believe that some of them are not workable: (2) It is unfair to require multiplex operators to commit to how much they would invest and be responsible in encouraging the early take-up of set-top boxes or digital receivers, especially when the Government had proposed that these are open access (interoperable) devices. *To encourage early take-up rate of STBs and idTVs should be a Government-Industry joint effort.* (3) Unless it is a combined licence, the multiplex operator would not have a realistic proposed arrangement for the line-up of services to be carried on the multiplex since at the time of the application, the Government might not have granted licences for programme providers and additional services, and what kind of services and the number of players in the field would still be unknown.

2.11	Multiplex licences should be categorised as a carrier licence under the Telecommunications Ordinance (Cap. 106) (paragraph 6.3).	No comment.
2.12	A company should not be allowed to submit applications for more than two multiplex licences (paragraph 6.4).	We disagree with the proposal to limit the number of multiplexes a licensee could operate because: taking into account of the long-term nature of the investment and licensing period (15 years as proposed in paragraph 6.3), while the number of available multiplexes might be limited during the simulcast period, the number of multiplexes would increase in post analogue days which could be 5-7 years into the licence period.
2.13	To include the following general conditions, among others, in the multiplex licences to require the licensees to (paragraph 6.5) - (a) provide multiplex service to television programme service licensees and additional service licensees in a non-discriminatory way; (b) ensure that all television programme services and additional services carried on the multiplex are licensed under the Broadcasting Ordinance (Cap. 562) or (Telecommunications Ordinance (Cap. 106), as appropriate; (c) conform with relevant technical standards; (d) fulfil the commitment on network coverage investment, and proposed arrangement for the line-up of services as contained in the application.	We agree, except for the latter part of point (d) to fulfil "the proposed arrangement for the line-up of services as contained in the application," since it would be out of the multiplex operator's control because the multiplex operator is only a service carrier under the separate licensing regime.
2.14	Of the four categories of television programme services, only "domestic free television programme service" and "domestic pay television programme service" should be allowed to be carried on a multiplex during the simulcast stage (paragraph 6.7).	We agree to limiting programme provider licences to "domestic" television services during simulcast period. However, we propose that priority should be given to "free" domestic television services and allow adequate spectrum provision for free domestic enhanced TV services, as opposed to pay services given the limited DTT spectrum capacity during the simulcast period and there are other platforms, e.g. cable and satellite, that could better serve the pay players with the capacity for a vast number of channels.

2.15	The licence conditions for television programme services carried on a DTT multiplex should be similar to the general conditions in the existing domestic free or domestic pay television programme services licences, as the case may be (paragraph 6.8).	We agree.
2.16	Subject to spectrum or other physical constraints, there should not be a ceiling on the number of licences to be issued for television programme services carried on DTT multiplexes (paragraph 6.9).	We have no objection to the proposal.
2.17	A domestic free/pay television programme service licensee should not be allowed to take up the bit-rate capacity of more than one multiplex (excluding the guaranteed slots allocated for simulcast services) (paragraph 6.9).	We disagree with this proposal because the capacity simply would not be adequate if existing terrestrial broadcasters were to offer HDTV services, even with one whole multiplex and the 50% guaranteed slot on another multiplex for digital simulcast for each. The ratio would be one multiplex for one HDTV channel -- that means ATV and TVB would need 2 multiplexes each to offer HDTV for each of the existing channels.
2.18	Licences for additional services should be categorised as Public Non-exclusive Telecommunications Service licences issued under the Telecommunications Ordinance (Cap. 106) (paragraph 6.11).	No comment.
2.19	A multiplex licensee should be allowed to reserve a maximum of 25% of the multiplex capacity exclusively for the provision of additional services (paragraph 6.12).	We disagree. There should not be a ceiling for additional services of any multiplex; Government should leave it for the market to decide.
2.20	To regulate the provision of electronic programme guide service udder the competition provisions in the Broadcasting Ordinance (Cap. 562) and/or the Telecommunications Ordinance (Cap. 106), as appropriate (paragraph 6.14).	The Government's proposal is unclear as to what would be considered anti-competitive. Because the Government had spelt out the promotional function of the EPG (paragraph 6.13), we believe that programme service providers should be free to provide their own exclusive EPGs since the EPG is a fundamental promotional tool in the digital TV era akin to the on-air promotion in analogue TV.

2.21	To reserve “guaranteed slots” on two Multiple Frequency Network multiplexes for the simulcast of the existing free-to-air analogue television channels (paragraph 7.7).	We agree with the proposal of guaranteed slots, but instead of mandating the carriage on MFNs, we should be given the option to choose to be carried on the SFNs under the current proposed frequency plan or a multiplex that would have territory-wide coverage, after a workable frequency plan has been coordinated and finalised with the Mainland.
2.22	To require the two multiplex licensees as mentioned in paragraph 2.21 to carry the existing free-to-air analogue television channels free of charge until the analogue services are switched off (paragraph 7.7).	We agree to the “free must carry” principle provided that the multiplex licensees concerned do not charge viewers any fees.
2.23	To require that all the programme hours provided on the existing analogue channels should be simulcast on the guaranteed digital channels (paragraph 7.8).	We agree.
2.24	To invite applications for multiplex licences as soon as possible with a view to commencing simulcast services in end 2002 or early 2003 (paragraph 7.9).	We believe that the commencing date for licensing is impractical and should be postponed until after the expected improved Chinese DTT standard could be evaluated and coordination with Mainland authorities has reached a stage when a workable frequency plan can be finalised. Therefore, the target date for commencing digital terrestrial television services should be postponed to end of 2003 or early 2004 .