



Introduction

In late 2013, the NBTC (the nation's merged broadcasting and telecoms regulator) managed Thailand's first spectrum auction of 24 commercial digital terrestrial TV licences. This heralds a new era in converged digital media.

As with telecommunications, broadcasting uses spectrum, a scarce national resource. Digital broadcasting has far greater spectral efficiency (Mbps for each MHz of bandwidth) than does the analogue use of spectrum, allows for much better picture quality and also supports a range of other value-adding features and functionality. Digital television (DTV) is the transmission of audio and video by a digitally processed and multiplexed signal. The DVB T-2 standard is adopted in Thailand for terrestrial broadcasting (along with all other ASEAN nations other than the Philippines). Broadly however, digital TV in various forms uses a variety of network types.

As with most countries, Thailand has started digital broadcasting well ahead of the end of analogue transmission (Analogue Switch Off date or ASO), which will take some time. The forces of convergence between telecoms (especially mobile) and broadcasting are playing out now and the outcomes are fascinating.

The industry has spawned take up in technology and services, with a range of value-adding, innovative platforms and applications which push traditional boundaries at a very fast rate.

We hope this half day conference will provide a better understanding of the industry, showing how European and other foreign and local firms can participate (eg through technology platforms, and content) and how Thai content and knowhow could be exported, and to consider some policy aspects.

This booklet contains the programme, speaker bios and a short version of a background paper (The long version is a PDF file which will be available at the EABC website, along with presentations, some time after the conference).

As with the EABC-JFCCT ICT full day conference in July 2013, we have two modes of engagement – an Address with presentation, and a Moderated Engagement (on services, content and technology) – which allows for greater, in-depth examination of the issues.



Conference Programme

Time	Programme
08:30 – 9:00	Registration
9:00 – 9:10	Welcoming Remarks Madeleine KIHLEBERG – First Counsellor EUD in Thailand, Lao, Cambodia, Myanmar
9:10 – 9:50	Keynote address: Digital Broadcasting – the regulator’s vision Col. Dr. Natee Sukonrat– Vice Chairman NBTC and Chairman Broadcasting Commission
9:50 – 10:25	Address: Digital Broadcasting and TV in a converged marketplace Speaker I: Allan T Rasmussen – Managing Director, Yozzo Ltd.
10:25 - 10:45	Refreshment Break
10:45 – 11:15	Address: Digital Broadcasting and TV – What we can hope to experience Speaker II – Sebastian-Justus Schmidt CNX Creative, part of SPB TV
11:15 – 11:30	Address: A Broadcaster’s perspective, vision and plans Speaker III: Mr. Pana Janviroj - President, Nation Multimedia Group
11:30 – 12:00	Moderated Engagement: services, content and technology Speakers I, II, III and Moderator
12:00 – 12.10	Address: Service sector liberalization and digital broadcasting, digital TV JFCT / EABC - Bob Fox
12:10 – 13:45	Networking & Interactive lunch



Speaker Biographies

Names	Bio
Ms.Madeleine KIHBERG First Counsellor EUD for Thailand, Lao, Cambodia, Myanmar	<p>Ms Madeleine Kihlberg, a Swedish national, is presently Deputy Head of the Trade and Economic Section at the Delegation of the European Union to Thailand. She has been working for the European Commission for 18 years, in the areas of Fisheries, Development Cooperation, and for the past six years for the Directorate-General for Trade. Before taking up her position at the EU Delegation to Thailand she worked for five years in the EU Delegation to Vietnam covering EU-Vietnam bilateral trade negotiations, market access matters and relations with the business community. She has a Master's Degree in International Politics from the "Centre Européen de Recherches Internationales et Stratégiques"/"Université Libre de Bruxelles", Brussels, a Postgraduate Diploma in Development Finance from the School of Oriental and African Studies (SOAS), London, UK. She obtained her Bachelor's Degree in Journalism from the University of Stockholm, Sweden.</p> <p>EU Delegation in Thailand represents European Union as the administrative arm of the European Institutions. The Delegation promotes the political and economic relations between Thailand and the EU by maintaining extensive relations with governmental institutions and by increasing awareness of the EU and its programmes.</p>
Col. Dr. Natee Sukonrat Vice Chairman NBTC and Chairman Broadcasting Commission	<p>Col. Dr. Natee Sukonrat is vice-chairman of the National Broadcasting and Telecommunications Commission (NBTC) and chairman of the National Broadcasting Commission, part of NBTC. He received his doctorate degree in Electrical Engineering from University of South Florida, United States and spent almost 2 years working for Qualcomm Inc. in San Diego, California, right after graduation, before returning to his military career in Thailand, where he was actively involved in the development of military telecommunication network.</p> <p>Col. Dr. Natee was a member of the Board of TOT Public Co., Ltd. and also Acting CEO for several months. Earlier in his career at NBTC, he was the driving force behind the 3G licensing and broadband wireless access licensing.</p> <p>The NBTC is the successor to the NTC (National Telecommunications Commission) and was to have been successor to NBC (National Broadcasting Commission, which was never formed). The NBTC is thus a 'merged' regulator (covering broadcasting and telecommunications) and industry developer.</p>



Mr. Allan T Rasmussen
Managing Director
Yozzo Ltd

Allan T. Rasmussen is the Managing Director of Yozzo, a Thai ICT strategy consultancy firm, which serves Media and Broadcasting companies, Mobile Network Operators and MVNOs, Governments and Regulators, Device manufacturers and software companies, including some of the new commercial digital TV stations in Thailand for “non-broadcast” solutions e.g. business case and market strategy, Hybrid Broadcast Broadband TV, Social and Multi-screen TV platform and DVB-T2 Set-top box/device deployment.

He is the co-founder of the Lao company XY Mobile, which in co-operation with the Ministry of Posts and Telecommunications Lao PDR, developed the official Lao font for use on mobile devices, introducing Lao language on mobile devices. He is also part of a team which is to launch two MVNO’s in the region this year.

He has held various positions in broadcasting and ICT companies in Thailand and the region including working for BBC, CNN, CNBC, MGM, Scandinavian and European broadcasters. He began his career in broadcasting at age 18 in Denmark and 5-years later, he bought the television station he was working for.

Allan is a member of Thailand's DVB-T2 Set-Top Box Standard Committee at the Engineering Institute of Thailand, which focuses on technical standards for these STBs which aims to ensure smooth migration, interoperability, compatibility and universal access to digital broadcasting services in Thailand.

Mr. Sebastian-Justus Schmidt
Corporate Development,
Co-Founder of SPB TV
AG, Switzerland
Managing Director of
CNX Creative Ltd,
Thailand

Sebastian-Justus Schmidt is today responsible for Corporate Development and overseeing the expansion of SPB TV in South-East Asia, Middle East and BRICS countries. Sebastian also heads CNX Creative Ltd., part of SPB TV Group, in Chiang Mai as Managing Director.

Prior to joining SPB TV in February 2013, Sebastian served as Executive Vice President and General Manager at Yandex (the largest European internet company with the highest market share for search in CIS countries ahead of Google). Sebastian has also been CEO at SPB Software for almost a decade. Before that he had occupied C-level positions for media-software companies in Germany, including being Managing Director at Management Data AG which led the Digital Broadcast wave in Europe more than 15 years back.



Sebastian has extensive experience in IT management, having worked on leading positions in European broadcasting, video and picture compression companies. Sebastian is the founding member of the DVDA (Germany) and joined the DVD-Forum (Japan) in 2007. He worked with the Chamber of Commerce in Hamburg and several IT Organizations, including Bitkom in Germany.

Mr. Pana Janviroj
President
Nation Multimedia
Group

Mr Pana Janviroj is President of The Nation, Thailand's leading English-language newspaper. He is also Executive Director of Asia News Network. He was editor of The Nation during 1996-2005.

Mr Janviroj was born in 1959 and entered Vajirayudh College, Bangkok, before going on to England to study at Charterhouse School. He received a bachelors degree in economics (hons) from Essex University in 1981, after which he attended Tufts University in the US and graduated with a masters degree. Returning to Thailand in 1983, he started off his working career as a researcher at Chulalongkorn University Social Research Institute before moving to work on a research project for Thailand's planning agency the National Economics and Social Development Board. Mr Janviroj has also worked for NBC Film and an export-import business.

His journalism career began in 1984 as a business reporter with The Nation, four years after which he became the business editor, and executive editor in 1994. Mr Janviroj became editor of The Nation in 1996. The Nation is a recipient several local and international journalist awards. Mr Janviroj was a Jefferson fellow at East-West centre.

Mr. Bob Fox
Vice Chair EABC ICT
Working Group & Chair
JFCCT ICT Group

Robert Fox ("Bob") is Chairman ICT Group JFCCT, Vice Chairman ICT Group EABC and holds other regional roles in trade and investment policy in the services sector. On the judging panel for the prestigious annual Telecom Asia annual awards for several years, he is engaged with technology management, representing enterprise solutions and working in development of movie and TV content delivery on a B2B basis in the region.

He was group CEO of one of Malaysia's largest listed companies (a multi-service telecoms operator), regional director Asia Pac for business strategy and development for BT (British Telecom), regional director Asia Pac for a NASDAQ listed broadband services company and later a similar



role for a US/Israeli consumer analytics company. He was one of the founders of Starhub Singapore, a member of the senior executive team to launch the UAE's second telecoms operator, project director and main board (Council) member for Australia's first and only full scale private university (25th anniversary 15 May 2014) and CEO of Australia's first high end mail order company. He was with Baker & McKenzie as an attorney for some years.

Bob has BA (political science, drama), LLB (international, commercial and competition law) UNSW Australia, and a master's degree from Stanford University Graduate School of Business; BT/SingTel Academy, listed board and other certifications.



Short Backgrounder

DIGITAL BROADCASTING and DIGITAL TV – short backgrounder

What is Digital Broadcasting

Broadcasting refers to the transmission to multiple points of reception of radio signals. Broadcast television was launched in Thailand in 1955, with colour (PAL) in 1969. For many years, an analogue signal has been used.

Digital television (DTV) is the transmission of audio and video by a digitally processed and multiplexed signal.

The migration to digital television broadcasting generates a 6-8 times improvement in spectral efficiency (MHz of spectrum needed for each Mbps in speed). This efficiency gain potentially frees spectrum resources (the so-called “digital dividend”) which can be used to support enhancements to broadcast television services (increased numbers of channels as well as High Definition programming) as well as providing additional spectrum for other services – specifically spectrum to support growth in wireless broadband services – in particular low frequency licensed spectrum for public mobile networks.

Digital TV means a vast array of value-adding services which can be used on a wide range of screen types (from large connected TV through to smartphones) and via a wide range of networks.

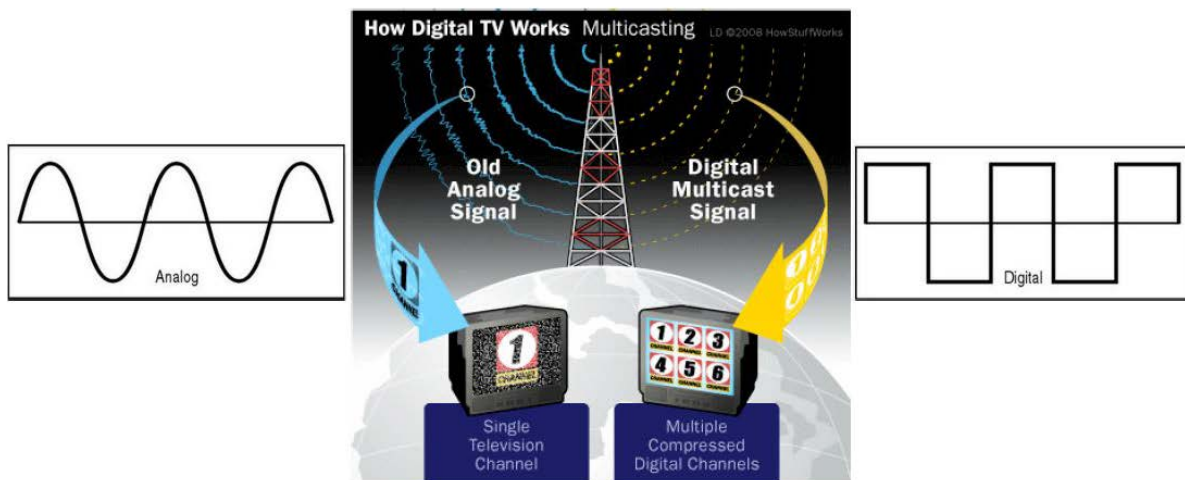
Thailand

In Thailand, three main television channel receivers are functioning.

1. Terrestrial Television,
2. Satellite Television, and
3. Cable Television

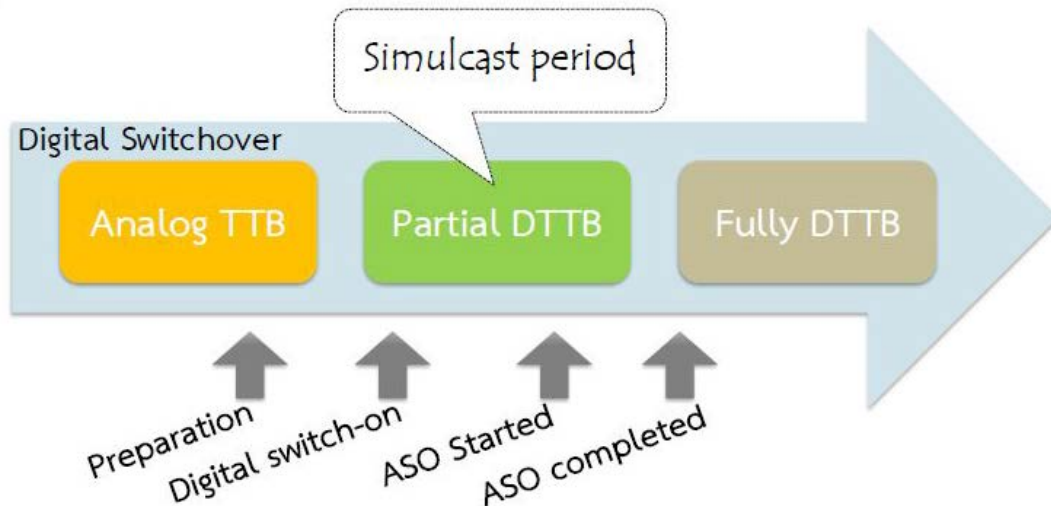


For the Digital Terrestrial Television, the newly system is to replace the old Analog Signal to Digital Multicast Signal as shown in the picture below



Transition process to Digital TV

The Royal Thailand Cabinet approved and acknowledged on 20 May 2013 the newly selected television standard of DVB T2 system. NBTC has prepared for transition management so called ‘Digital Switch-Over’ comprised of three periods.



Note: DTTB: Digital Terrestrial Television Broadcasting
DSO: Digital Switch-over
ASO: Analog Switch-off

1. Pre-Transition period

- Preparation of License Regulation, Regulating, Channel Auction, etc.
- Selection and Specifying of Standard
- Preparation of Transition Plan for Digital Television and Frequency Usage Plan

2. Transition period

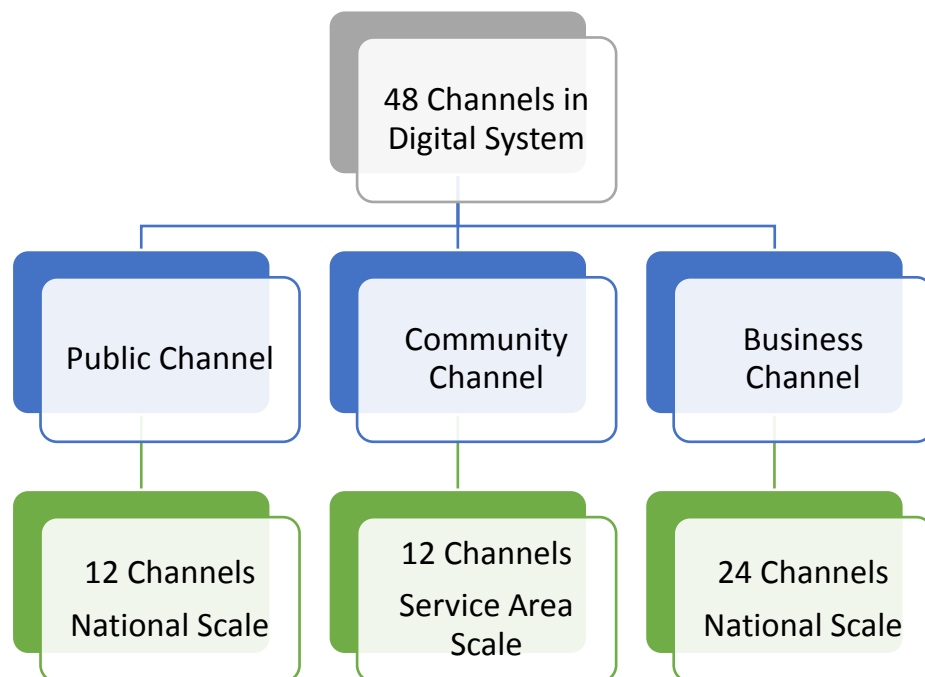
- License award for Digital Television Broadcasters
- Regulate the awarded broadcasters to operate in align with the rule and regulation in licenses annex issued
- Transition Management included
 - PR to educate consumers
 - Apply incentive measures and encourage the consumers to prepare for the change

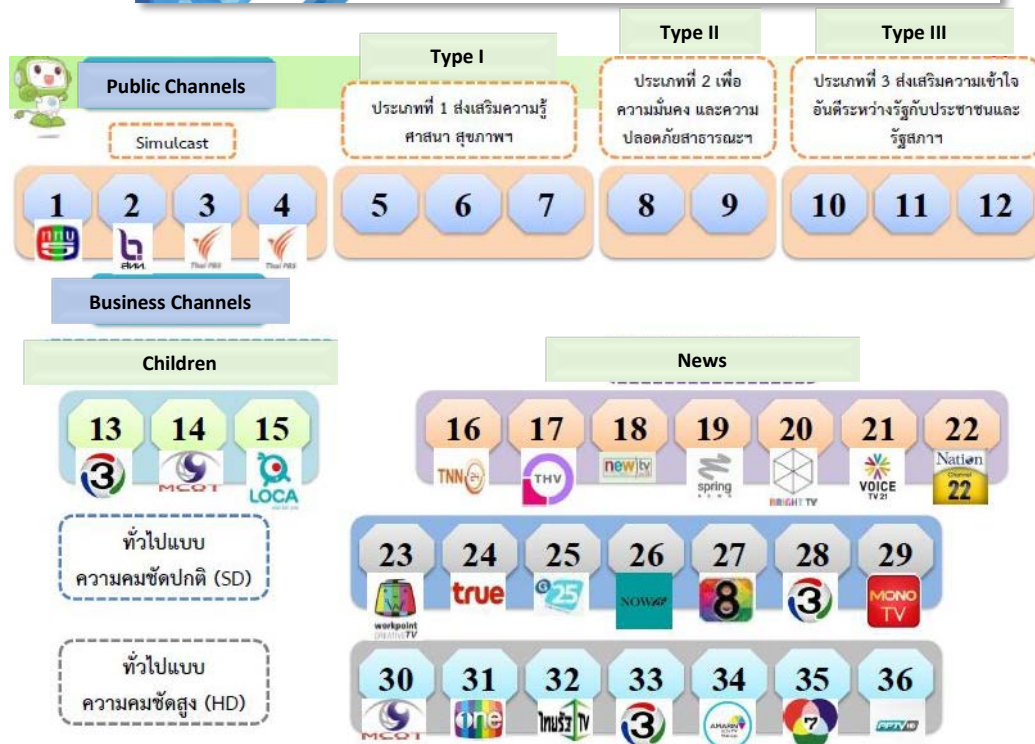
3. Post-Transition period

- Utilize the frequency that will be derived from the system change



TV Channel in the Digital System





List of Public Channels

Simulcast	MOU	New Licenses
1. CH5 2. NBT 3. TPBS	4. TPBS (Learning Channel)	5. Education/Science/Technology/Environment 6. Religion/Art and Culture/ Agriculture and Career Promotion 7. Health/Sport or other Quality of Life Promotion
	<u>C8-9 Objectives:</u> Toward Mor 11(1) to protect royal family/to protect State Sovereignty/Order Public and Conformity	8. State Security 9. Public Safety
		10. Encourage the good understanding between State and People & Parliament and People 11. Encourage to disseminate and educate people about the Democracy in Kingdom of Thailand 12. Useful public information serviced for disables , disadvantaged people and youth

Note: Type I : Chanel 5-7
Type II: Channel 8-9
Type III: Channel 10-12



List of Commercial Channels and Awarded Broadcasters

Channel	Broadcaster
<i>Children</i>	
13	BEC Multimedia
14	MCOT
15	TV Pool
<i>News</i>	
16	True "Thai News Networks (TNN)"
17	TV Pool
18	Daily News
19	Spring News
20	3A Marketing "Bright TV"
21	Voice TV
22	Nation Group "NBC Next Vision"
<i>SD Variety</i>	
23	Work Point
24	True
25	GMM Digital SD
26	Nation Group "Now"
27	RS Television
28	BEC Multimedia
29	Mono Broadcast
<i>HD Variety</i>	
30	MCOT



Channel	Broadcaster
31	GMM Digital HD
32	Thairath TV
33	BEC Multimedia
34	Amarin Television
35	Channel 7 “BBTV”
36	Bangkok Media and Broadcasting “PPTV” (Bangkok Dusit Service (BGH))

The Dec 2013 spectrum auction: Winners of the HD variety channel licenses

1. BEC-Multimedia (Bid: 3.53 billion THB)
2. Bangkok Media and Broadcasting (Bid: 3.46 billion THB)
3. Bangkok Broadcasting and Television (Bid: 3.37 billion THB)
4. Triple V Broadcast (Bid: 3.36 billion THB)
5. MCOT (Bid: 3.34 billion THB)
6. Amarin Television (Bid: 3.32 billion THB)
7. GMM HD Digital TV (Bid: 3.32 billion THB)

PM Group and Thai Broadcasting (Workpoint) which bid at 3.31 and 3.0 billion respectively did not win a license in the HD Variety channel auction.

The auction price for the HD Variety channels was according to NBTC above its target, which was set at 2.5-3 billion baht.

Winners of the SD Variety channel licenses

1. Thai Broadcasting Workpoint (Bid 2355 million THB)
2. True DTT (Bid 2355 million THB)
3. GMM SD Digital TV (Bid 2355 million THB)
4. BEC Multimedia CH3 (Bid 2355 million THB)
5. RS Television (Bid 2355 million THB)
6. Mono Broadcast (Bid 2355 million THB)
7. BangkokBiz Nation Group (Bid 2355 million THB)



Winners of the News channel category and their bids.

1. NBC Next Vision Nation Gorup (Bid 1,338 million Thai Baht)
2. Voice TV (Bid 1330 million THB)
3. Thai TV (Bid 1328 million THB)
4. Springnews Television (Bid 1318 million THB)
5. Thai News Network (Bid 1316 million THB)
6. DN Broadcast (Bid 1310 million THB)
7. 3A Marketing (Bid 1298 million THB)

Winners of the Children's channel category.

1. BEC Multimedia (Bid 666 million THB)
2. MCOT Plc (Bid 660 million THB)

Spectrum management

The European Union created the 800MHz band from its digital dividend, which is being utilised for the deployment of the coverage layer of 4G (LTE) public mobile network. ASEAN member states are currently considering creating the 700MHz band from the digital dividend for this purpose. Whilst the digital switchover has taken place in almost all European Union member states, in the ASEAN region switchover is likely to occur in the next 5-6 years. Digital commencement predates ASO (Analogue Switch Off) by several years, typically.

Following the decision at WRC-12 (to be confirmed by WRC-15) to allocate the 700 MHz band on co-primary basis to broadcasting and wireless mobile services, the EU member states are currently considering the possibility of releasing the 700MHz band (in addition to the 800MHz band) in order to provide additional low frequency spectrum to support wireless broadband service growth. The broadcast community in many member states wishes to continue using this spectrum for broadcasting in order to support the deployment of additional television channels (particularly high definition) as well as to facilitate the migration to new transmission technologies (DVB-T2 and MPEG-4) which requires a period of simulcasting and hence higher demand for spectrum. The adoption of and importance of the digital terrestrial platform varies considerably across the EU.

In order to some standardisation is needed. The DVB T-2 standard is adopted in Thailand for broadcasting (along with all other ASEAN nations other than the Philippines). Broadly however, digital TV in various forms uses a variety of network types.



Legal regime in Thailand.

Broadcasting services industry foreign equity limits are prescribed in List 1 of the Foreign Business Act. Separate legislation also regulates broadcasting. For telecoms, the Telecoms Business Act and the Foreign Dominance Notification together restrict foreign ownership to 49% and apply other restrictions, for category 2 and category 3 licences. Foreign equity limits for category 1 licences are in List 3 of the FBA.

Where digital TV is viewed

On connected TV (eg with Set Top Box), on Smart TVs, on tablets and smartphones, and via a variety of network types.

Sources - include

Athea Consulting
NBTC materials
Yozzo Ltd

Co-organised by



The European ASEAN Business Centre (EABC) was established as a consortium with sixteen business organisations and chambers both in Thailand and Europe. EABC contributes towards the improvement of Trade and Investment in Thailand, fostering business co-operation between Thailand and Europe and to strengthening the Thai economy.

The Joint Foreign Chambers of Commerce in Thailand (JFCCT) with 29 Chamber members and about 8,000 end company members has been active in the ICT areas for well over a decade. The EABC and JFCCT in ICT areas are a unified voice of the foreign business community in Thailand, with regional and global linkages and expertise. Through dialogue and engagement, JFCCT ICT seeks to enhance the wider ICT sectors.

For more information, please visit: www.eabc-thailand.eu or www.jfcct.org



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CNX Creative www.cnxcreative.com is pleased to sponsor the conference and have the opportunity to provide some insights on the industry. CNX Creative, part of [SPB TV group www.spbtvsolutions.com](http://www.spbtvsolutions.com) (one of the world' leading platform and solutions providers for broadcasters and mobile operators) is the world-class digital media design team which focuses on UX, UI, GUI designs and 3D productions for use by mobile operators, broadcasters, smartphone makers and others needing digital media.

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The Association of Thai ICT Industry (ATCI) is Thailand's first Information Technology professional association. Its members include computer hardware and software manufacturers, distributors and service providers, together representing over 80% of Thailand's ICT market.
<http://www.atci.or.th/>



Creative Chiang Mai (CCM) is an idea, vision and initiative to promote creativity and innovation in Chiang Mai. CCM's mission is to promote Chiang Mai as a Creative City, special economic zone and creative hub.
<http://www.creativechiangmai.com/>



Media Agency Association of Thailand (MAAT) acts as a centre where various media organisations and related businesses can join in mutual co-operation to promote the media industry in Thailand, to enhance development of personnel in media agencies and to stabilize the industry's overall structure.
<http://mediaagencythai.com/>