



Digital Convergence in Taiwan

Challenges and Opportunities

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STAG Background

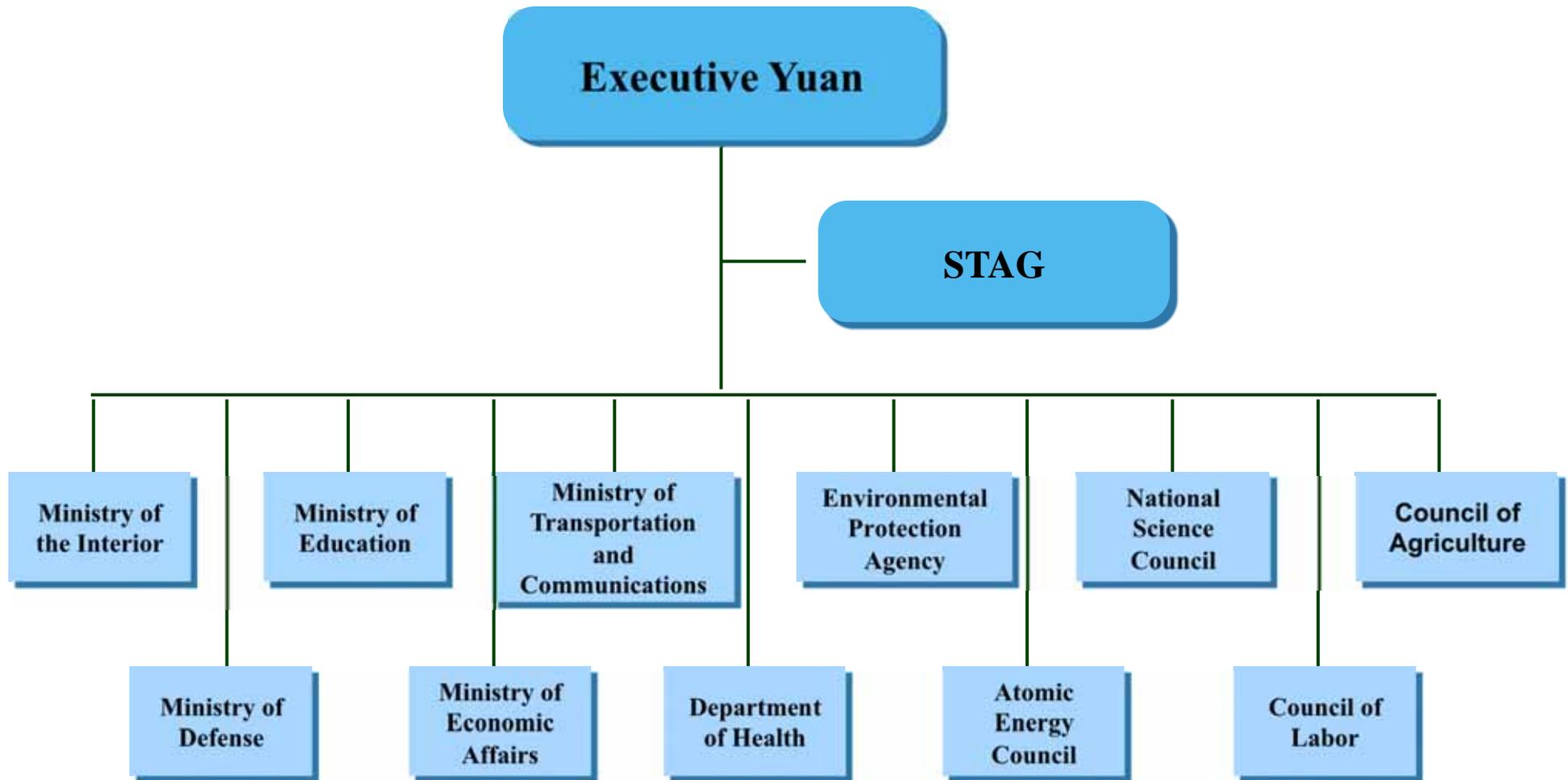
- STAG: Science and Technology Advisory Board
- Established in 1979 to conduct inter-agency coordination and to promote strategic S&T programs in Taiwan.
- A group of international and local S&T experts provide recommendations and suggestions to the Prime Minister, on the nation's mid- and long-term S&T programs during the annually held STAG Board Meeting.
- STAG serves as Prime Minister S&T staff, coordinating activities among the Prime Minister, his Advisory Board, and various government ministries and agencies.



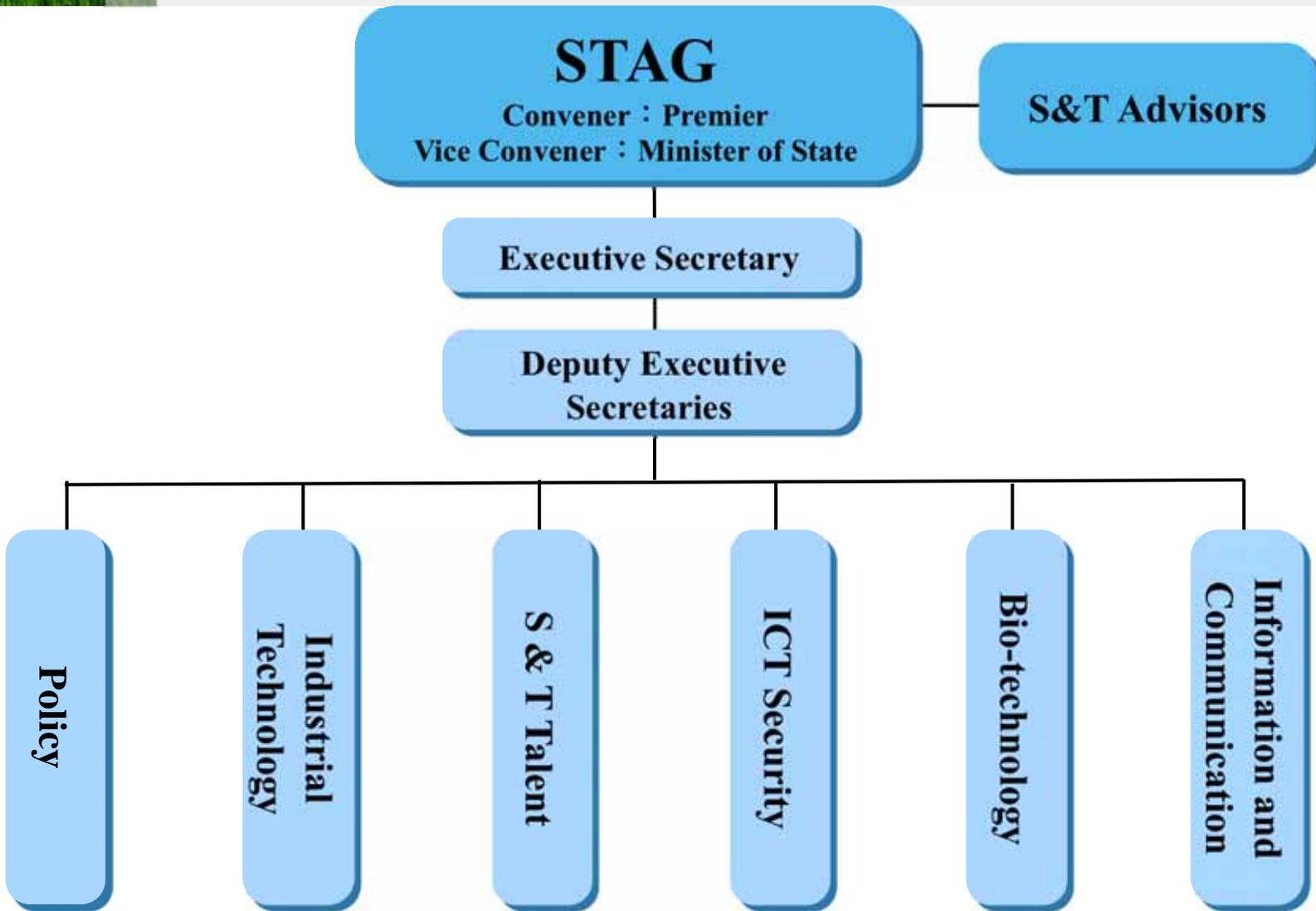
Missions

- 1. Formulating Advisory Group for the Executive Yuan**
- 2. Organizing STAG Board meeting and other strategy meetings**
- 3. Coordinating inter-departmental programs**
- 4. Funding the initial-stage of projects proposed or approved by the STAG meetings**

Organization Charts of Technology related Ministries



Organization of STAG Office





Information and Communication Unit

Missions

National Information and Communications Initiatives (NICI)

- Digital Convergence
- Spectrum Planning (ie: 700 MHz)
- ICT Regulations
- Next Generation Network
- WiMAX Blueprint
- Digital TV/ Mobile TV/ IP TV
- ITS/Telematics
- e-Learning/Digital Content
- Open Source/ITeS

e-Taiwan

M-Taiwan

u-Taiwan

Intelligent Taiwan



ICT Security Unit

Missions

National
Information and
Communication
Infrastructure
Security

- Policy planning of National Information Communication Infrastructure Security
- Integration and promotion of cooperation among related organizations
- Supervision and management of public ICT security projects
- Coordination of National Information Communication Security Taskforce (NICST) related affairs

Improve cyber
incident response
time

Build capacity to
ensure ICT
security

Promote education
and awareness of
ICT security

Strengthen
international
collaboration

六大新興產業主要旗艦計劃

醫療照護產業

- 科技化健康照護創新服務計畫
- 長期照顧十年計畫
- 遠距照護試辦計畫

生物科技產業

- 生技製藥國家型計畫
- 基因體醫學國家型計畫
- 生醫科技島計畫
- 農業生技產業化發展計畫

精緻農業

- 發展有機農業計畫
- 肉品衛生安全維護計畫
- 石斑魚產值倍增計畫
- 農業生物技術產業化發展方案
- 休閒農業加值發展計畫

觀光旅遊產業

- 重要觀光景點建設中程計畫
- 觀光拔尖計畫

文化創意產業

- 公藝創意產業發展計畫
- 台灣設計/數位內容產業計畫
- 台灣流行音樂中心/電視產業計畫
- 故宮文化創意產業旗艦計畫

綠色能源產業

- 能源國家型科技計畫
- 新能源產業旗艦計畫

二、數位匯流發展方案指標調整方向⁽¹⁾

指標項目		99年(2010)	100年(2011)	101年 (2012)	102年 (2013)	103年 (2014)	104年 (2015)
1.可接取100Mbps寬頻網路之家戶率		0% (4%)	3% (100/4, 6.12%)	12%	30%	65%	80%
2.光纖用戶數	(一) 固網用戶數	200萬戶 (195.8萬戶)	260萬戶 (100/4, 205.6萬戶)	330萬戶	410萬戶	500萬戶	600萬戶
	(二) 固網及Cable Modem 用戶數	295萬戶 (288.5萬戶)	380萬戶 (100/4, 301.7萬戶)	465萬戶	550萬戶	635萬戶	720萬戶
3.無線寬頻網路帳號數	(一) 3G Data Card +WiFi+WiMAX [註1]	85萬戶 (98.5萬戶)	105萬戶 (100/4, 108萬戶)	125萬戶	150萬戶	175萬戶	200萬戶
	(二) 3G Phone (開通服務) +WiFi +WiMAX [註2]	1,600萬戶 (1,658萬戶)	1,700萬戶 (100/4, 1,718萬戶)	1800萬戶	1900萬戶	2000萬戶	2100萬戶

[註1] 以無線接取方式(包含3G Data Card、WiMAX、WiFi等)提供寬頻服務之帳號總數。

[註2] 參照 ITU：以無線接取方式(包含3G Phone (含3G Data Card)、WiMAX、WiFi等)提供寬頻服務之帳號總數(其中3G Phone 為開通數據傳輸服務之3G手機及數據卡之用戶)。

二、數位匯流發展方案指標調整方向(2)

指標項目	99年 (2010)	100年 (2011)	101年 (2012)	102年 (2013)	103年 (2014)	104年 (2015)
4.數位有線電視普及率(有線電視總戶數) (註1)	7% (7.7%)	10% (100/03,8.39%)	15%	25%	35%	50%
	7% (7.7%)	15%? (100/03,8.39%)	23%?	38%?	53%?	75%?
5.新興視訊服務用戶普及率 (註2)	10% (10.2%)	11% (100/05,11%)	13%	20%	35%	50%
6.法規革新			第1階段 ：促進跨媒體匯流服務，完成廣電三法及電信法修法草案，於2012年6月提報行政院核定送請立法院審議		第2階段 ：營造數位匯流新環境，完成廣電三法及電信法草案(或匯流形式規範架構) 於2014年6月完成立法	

[註1]指標計算以有線電視總用戶為分母，數位化有線電視用戶為分子，99年12月7.7%。

[註2]網路電視：全國總家戶數。98年新興視訊服務用戶普及率9%，100/02約82.46萬戶。



What is “Digital Convergence”?

- Convergence of voice network, TV network and Internet.
- Anytime, anywhere using any device to enjoy any content and service.
 - I can use TV to talk, to watch video, to do shopping and to surf Internet, etc.



Opportunities

- New service innovation
 - Always connected (voice, picture and video)
 - Location Aware
 - Personalized
 - Intelligent
- New service infrastructure
 - FTTH and 4G+ communication
 - Cloud computing and P2P computing
 - Very powerful and portable devices – device oriented services



Opportunity - TV 2.0

- Time shifted
 - TV anytime
- Location shifted
 - TV everywhere
- Content shifted
 - Unlimited channels
 - Personalized channels
 - Package channels (套餐)
 - HDTV, 3DTV
- Control shifted
 - Interactive



Social TV

- See what they are watching on their TVs
- Exchange favorite lists of TV programs and VOD movies
- Recommend TV programs or VOD movies to one another
- Send VOD movie gifts to their friends
- Lock their TV screens onto one another and watch the same content





Research Challenges

- New devices and new services
 - Device oriented services
- New problems
 - Security
 - Information theft
 - Imposter
 - Privacy
 - I am being watched
 - Never-fail systems
 - Too dependent on technology



Final Thoughts

- Our life will be changed soon because of digital convergence – a new industrial revolution.
- A lot of business opportunities for entrepreneur.
 - Many Google, Facebook, etc.
 - Many Bill Gates
- A new connected world may be dangerous
 - No privacy?
 - Too much technology?
 - Good time to be a researcher.