從終端用戶的經驗探討台灣固網服務的困境與挑戰

Discussing the dilemmas and challenges of fixed network services in Taiwan from the experience of end users

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我今天講的內容被你的專家打槍也不意外，因為這是我有限的經驗。如果你是相關的業者，我今天就是要來抱怨的。因為我英文很爛，所以英文的部分是用 Google 翻譯，如果你覺得意思很奇怪，會後簡報分享可以找懂中文的朋友幫你解釋。

It's not surprising that what I'm talking about today is criticized by your experts, because this is my limited experience. If you are in the relevant industry, I am here to complain today. Because my English is very poor, I used Google Translate for the English part. If you think the meaning is strange, you can ask a friend who understands Chinese to help you explain it after the meeting.

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Who am I. 自我介紹

DAVID HUANG / HUANG.LIFU / 黃立夫

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IT in Rayark Inc. 雷亞遊戲

Who am I. 自我介紹

2015-迄今，擔任 IT，主管 DNS 跟 SSH 服務正常運作前的所有網路跟基礎架構服務，包含管線線路跟電力。

2005-2014，NAS SAN STORAGE 軟體開發 QA，Teleconference FAE，IT/DBA/SRE

2015-Present. Responsible for IT, responsible for all network and infrastructure services before DNS and SSH services are operational, including pipelines and power.

2005-2014, NAS SAN STORAGE software development QA, Teleconference FAE, IT/DBA/SRE.

Who am I. 自我介紹

2009-2015，線路組，協助各大社群活動提供網路服務

2017，TWNIC IPv6 行動上網服務測試專案推廣

2009-2015, CPR team, assisting major community activities in providing network services. CPR means Cable Power Radio.

2017, TWNIC IPv6 mobile Internet service test project promotion.

Who am I. 自我介紹

「吾少也窮，故多能事」。

我很早離開學校，做過很多一般人沒有想過的工作。

"I am young and poor, so I can do a lot."

I left school early and worked in a lot of jobs that most people wouldn't think about.

Issues of long-term concern. 長期關注議題

行動電話基礎建設跟應用服務市場。IPv6 網路服務架構。電力系統跟電信固網。安全架構，包含但是不限於軟體，硬體，場域。資料儲存系統。

Mobile phone infrastructure and application service market. IPv6 network service architecture. Electric power systems, telecommunications services, fixed network services. Security architecture includes but is not limited to software, hardware, and fields. Data storage system.

綜合網路業務業者 Integrated Internet service provider.

中華電信。CHT.

遠傳。FETNET.

台哥大。TAIWANMOBILE.

亞太電信。APTG.

2015

市內網路業務業者 Metropolis network business operator.

台北光網。TaipeiFiber.

大台中數位有線電視股份有限公司。VeeTime.

大屯有線電視股份有限公司。TDTV.(TOP)

佳聯有線電視股份有限公司。CLTV.(TOP)

中投有線電視股份有限公司。CNT.(TOP)

台灣佳光電訊股份有限公司。TOPLIGHT.(TOP)

台灣基礎開發科技股份有限公司。TINP.

台灣數位光訊科技集團。Taiwan Optical Platform. 2020

市內國內長途陸纜電路出租業務業者 (城市之間)
Inter-city domestic long-distance land cable circuit rental business operator

有線電視網路加上其他業者有 66 間公司。Cable networks and other operators have 66 companies.

大台北區瓦斯股份有限公司。TaipeiGas.

欣中天然氣股份有限公司。SHIN CHUNG Natural Gas.

新海瓦斯股份有限公司。Shin Hai Gas Corp.

台灣中油股份有限公司。CPC Corporation.

台灣電力股份有限公司。TaiPower.

高雄捷運股份有限公司。KRTC. 2020

點對點專線 Point-to-point dedicated line.

MPLS VPN。Hi-Link。Dark Fiber。

市內電話專線(保全線路)。Dedicated local telephone line.

對中國的路由問題。Routing issues for China.

非中華電信路由問題。Non-CHT routing issue.

居民障礙。結構。管理委員會。Resident barriers. Structure. Management Committee.

跨越馬路專線問題

短距離建築物之間的線路，邏輯上應該是要透過有線電視網路業者提供服務，但是台灣的有線電視服務業者沒有 Dark Fiber 或者市內專線的服務項目或者產品，非有線電視業者的廠商多是因為自己的線路需求取得執照，所以也沒有相關的營業項目，最後透過綜合網路業務業者提供的 MPLS VPN，或者是自建的 IPsec site to site VPN，結果就是又貴又慢。另外一個方法是無線網路橋接設備，但是今天的主題是固網，所以就不討論這個部分。

The issue of dedicated lines across the road.

Logically, short-distance lines between buildings should be provided by cable TV network operators, but Taiwan's cable TV service providers do not have Dark Fiber or city dedicated line services or products.

Most manufacturers that are not cable TV operators need to obtain licenses for their own lines, so they do not have related business projects. Finally, we use MPLS VPN provided by integrated network service providers or self-built IPsec site-to-site VPN, which turns out to be expensive and slow. Another method is wireless network bridging equipment, but today's topic is fixed network, so we will not discuss this part.