

Chat history in "ICTPA 國際華人交通運輸協會"

MF

台灣的交通部很想積極推動自駕車的產業與服務，各位先進認為最應該優先關注那些課題呢？敬請惠示卓見！謝謝！

陳瑞麟 Reh-Lin N. Chen

跟據我個人這一兩年參與的相關討論和對台北大都會區的瞭解，我個人的愚見是自駕車的交通安全可靠度要提高，另外可加強 **Connected Vehicles** 的研發，讓自駕車和人駕車都可以和自動電腦號制聯結，造成省油、節速又安全的車流。路邊停車和公私停車場的技術及安全配合也是必需。另外在監理、即時交通事故處理和保險理賠，也要探討配合。我有空再找一些其它我可能忘記的要點。請吳先生和大家先指正，也共同探討。

Jimmy Lin

我公司最新在台灣完成的一項工程短片和諸位分享。CTC 設計監造高雄鼎金系統交流道匝道改善工程，施工法難度很高

<https://drive.google.com/file/d/1dUfPjOiiYGtnwtLpDfF8pkenl8mhdZ0r/view?usp=sharing>

Alice Kuo

我們也應聽聽正反兩面的意見,分享不同的意見.畢竟台北人口密度高,很難想像讓自動車在台北街頭橫衝直撞,若無論適當的管制,恐怕會比摩托車造成的事故更後患無窮.這只我一个門外漢的淺見.

陳瑞麟 Reh-Lin N. Chen

個人的愚見，認為 **Autonomous Vehicles** 的科技遲早會在美國、歐州甚至亞州盛行，只是時間及發展進度問題。使用道路的老百姓像 Alice 及我輩非專家，也是政府推動此科技上路時，最需要做推廣及再教育的對象，所以大家的意見也是很重要的。

Alice Kuo

我建議有意參與這個議題的,廣邀賢士(or 女士),可以先提個主題,ICTPA 在明後年打算在上海及台灣開亞太交通運輸年會,屆時可加入一個圓桌議題,可以進一步研究這個可行性. 如果各位有興趣,請 ICTPA 各分會推舉一個人選來收集 local 的資料,或技術性的報告.先發表在 ICTPA 的網站,等日後成熟了,再統籌登載於有關網頁.

陳瑞麟 Reh-Lin N. Chen

Joel 和各位先進：中華工程顧問公司吳董事長盟分日前才提問此問題：“台灣的交通部也很想積極推動自駕車的產業與服務，各位先進認為最應該優先關注那些課題呢？”

瑞麟在去年退休前，有幸參與 2019 年 10 月 2 日，在南舊金山灣區的世界自動車安全性的高峯會議。會議名稱、內容及參考資訊如下：World Safety Summit On Autonomous Technology

<https://velodynelidar.com/safety-summit/>

當天的一則新聞報導有此標題 [World Safety Summit On Self Driving Car Tech Kicks Off At Levi's Stadium](https://sanfrancisco.cbslocal.com/2019/10/02/world-safety-summit-on-self-driving-car-tech-kicks-off-at-levis-stadium/), 詳細新聞報導可進此網站閱讀全文。

<https://sanfrancisco.cbslocal.com/2019/10/02/world-safety-summit-on-self-driving-car-tech-kicks-off-at-levis-stadium/>

但我把重點提出給大家參考：

1. 各個廠商都在競技，但是瞭解大家仍需要合作才更有力量和成效。
2. 自動車的車速和安全自動控制是要最先要處理的前題。如果不安全超速的無人車要上路，政府、業者和使用者絕無接受無人車的可行性。

Anand Gopalan, Velodyne Lidar's Chief Technology Officer, noted the collegial atmosphere among competitors in these early days of development.

"I think people learned that going fast was really challenging," said Gopalan. "I think now that's been tempered by reality where people realize if you're driving really fast, you have to make some very challenging decisions very quickly. So you are now seeing start with more modest expectations, where they want to make this technology work at 30, 35, 40 mph...And then tackle the problem of speed."

Sun, 6/7/2020

Jimmy Lin

Hi, Gentlemen, and ladies, I am very pleased to have the opportunity to hook up with you all again. Peter, I last saw you in Houston and you were leaving for New Orleans afterward, god, it was 4 years ago?

As far as AV is concerned, it is a perpetual topic. I remember attending a seminar a few years back hosted by MIT's AV team director, he was very candid about the purpose and the future for AV. Think about it, aside from maybe the benefit of safety enhancement, there are no other benefit. Traffic congestion could be worsen because of more capacity with less headway. We are not going to totally eliminate the drivers therefore there will always be mix flow which will screw up the platoon. I just bought a Maserati, do you think I want it to drive by itself, hell no. AV depends highly on external technology and infrastructure which can go bad spontaneously. I believe the best application for AV is to run a routine transit route in a confined compound like college campus of sort that it can operate continuously until it runs out of juice. My point is, let's pick a more interesting topic. **AV is pretty stale right now!**

Joel

Totally agree with Jimmy. However, my government is going to invest a lot of money in this industry. I have no way to stop them, so probably it's a good idea to organize a forum and put all the pros and cons on the table.

JamesC 焦國安

該特斯拉在快要到達揮手人的位置開始有白煙冒出。也許要問車輛事故專家，在該車的當時速度下，要煞車多久才会有白煙冒出？不知當時特斯拉的自動輔助駕駛系統市府開啟？

<https://udn.com/news/story/7320/4606009>

特斯拉黃姓駕駛則向警方供稱，他確實有開啟車輛輔助系統，當時車速也維持約 110 公里左右，本以為車子的煞車系統會偵測到障礙物而啟動，後發現車子仍定速前進，他反應過來後即馬上踩煞車，但已無足夠時間及距離閃避貨車，才會直直撞上貨車廂。”

以下是特斯拉官網的性能介紹：

駕駛輔助功能

8 部攝影鏡頭和 12 部超音波感測器可以偵測車道標記和周圍物體 — 隨時提供 360 度的環繞視野。

駕駛輔助功能

所有新款 Tesla 車輛均標配最進階的駕駛輔助功能，旨在提供增強的安全性和便利性，為駕駛員帶來輕鬆愉快的駕駛體驗。

展望未來的 Autopilot 自動輔助駕駛

所有 Tesla 車輛都具備未來在幾乎所有情況下全自動駕駛所需的硬體，我們相信未來的全自動駕駛安全程度將是一般人類駕駛的兩倍。

自動變換車道

在高速公路上駕駛時自動變換車道

全自動駕駛硬體配備

每輛全新 Model S 皆標配先進的硬體配備，提供滿足現有 Autopilot 自動輔助駕駛需求的配備，以及未來透過軟件更新不斷完善功能的全自動駕駛。

很顯然這個功能介紹使用了 Autopilot（自動駕駛）字眼，雖然中文翻譯加了輔助兩個字，確不能掩蓋英文的本意。

他們也強調「所有 Tesla 車輛都具備未來在幾乎所有情況下全自動駕駛所需的硬體，我們相信未來的全自動駕駛安全程度將是一般人類駕駛的兩倍。」以及「在高速公路上駕駛時自動變換車道」。顯然是誤導駕駛人。

因為特斯拉雷達特性的關係，雷達設定把靜止物件濾除了（避免被路側的分割島、公車站等等干擾）。靜止物件是無法辨識的。因此，至於影像應該是認不出來那個橫躺的貨車。

所以，交通部應該考慮管制類似宣稱 autopilot 車輛的文宣，以及在台灣道路上，除了特別許可的測試車輛，相關自駕功能應該關避，以免誤導駕駛錯誤認知。

JamesC 焦國安

[Video]

Joel

I should add one more for footnote. The industry we are focusing on is not autonomous vehicle manufacturing, but ICT related devices and solutions. For instance, artificial intelligence, Lidar, digital maps, and sensors.

JamesC 焦國安

This accident was on the news a few days ago in TAIWAN.

Jimmy's point is well taken particularly in Taiwan considering the mixed traffic with motorcycles whose driving behaviors are not something that AV will be able to detect and react properly.

Joel

If the promotion of autonomous vehicle is not simply for solving the problems of transportation, it might be a stimulus for future growth of ICT industry in Taiwan.

陳瑞麟 Reh-Lin N. Chen

I am glad to see Jimmy, James and Joel's discussions. James' recent collision example matched what I learned from the 10/02/2019 World Safety Summit On Autonomous Technology in San Jose area. Sensors and speed controls are two of ongoing top priorities of Autonomous Vehicles' developing technology that has a plenty of room for improvements.

JamesC 焦國安

President Obama proposed a \$4B budget for AV in early 2016. Obama asked: "There are going to be a bunch of choices that you have to make, the classic problem being: If the car is driving, you can swerve to avoid hitting a pedestrian, but then you might hit a wall and kill yourself. It's a moral decision, and who's setting up those rules?"

Will the insurance company, the car company, or the programmer will make the decision on who and what to hit right before and accident is happening?

There are quite a few issues (legislations, 5G network, who will make the calls under what conditions) need to be resolved in addition to technical requirements.

陳瑞麟 Reh-Lin N. Chen

Alice pushes me into this job responsibility for coordinating "Autonomous Vehicle Technology" without a warning. I believe someone else are more knowledgeable and capable than I. So, I will temporarily help on the subject matter until we find better qualified people for the tasks.

I may look for assists from any of you separately soon as well. My email address is rehlinchen@gmail.com Please communicate with me by Line and email if you wish. Thanks!

陳瑞麟 Reh-Lin N. Chen

Driving without Arms! Never give it up in life! People in this physical challenged group will be one of beneficiaries of Autonomous Vehicle Technology.

無手臂的駕駛! 絕不向命運低頭的人生!

這群身體障礙的人仕，應是未來發展自動駕駛車（Autonomous Vehicles）的受益者之一。

<https://youtu.be/tl28nkae5DU>

MF

謝謝大家對自駕車發展議題的很多寶貴的意見，還需要大家持續給力惠示卓見。

個人的看法是，自駕車的發展仍然有很多亟待大家面對的觀念與課題。

當然，安全運營始終不能打折扣。而面對這些未來發展，我們應該做好那些準備工作？尤其，自駕車的運營在任何地方都有本土化的課題，在台灣該怎麼有策略的去迎接這個新的交通運輸環境的演化？

歡迎大家多予指教……

特斯拉的車子在台灣的高速公路肇事，是大家所不樂見的。這也點出在台灣 L2+自駕車在高速公路運行，顯然還有大幅提升準備的空間。但這顯然也還不是台灣現在可以投入準備的「範疇」！

然而，台灣還是需要自己準備去調和自駕車運營的商業模式，譬如說社區的第一哩或最後一哩公共運輸的自駕接駁，會不會是優先可以開始準備投入的？

或者是 ART 系統的導入？

我們必須接地氣，在地就事論事……

Mon, 6/8/2020

Mengzhao

大家都好熱情。謝謝分享那麼多無人駕駛車的信息。

David Poo

Hi Alice, 不知您為何有這種印象耶？與其說是「有意見」（意涵負面），應該說是「有疑惑」。基本上我是需要學習的。

近十年科技發展，尤其是行動數據通信與運算的發展，讓「共享運輸服務」這個領域掀起了重大的變革。

惟…這些變革是由科技投資者引領推動的，缺少了我們傳統運輸服務規劃者的…「社會公正、公益」的考量。

所以我們看到 Uber 這種霸道的行為，欺負司機，拒絕繳納地方稅賦；還有浮動共享自行車成為城市垃圾。

現在「自駕車」或「無人駕駛車」還是有同一群科技投資者在推動，我們需要慎防重犯同樣的錯誤。

這些科技投資者需要主動的和運輸系統/服務規劃者對話。

MF

完全同意大威兄的看法！

這也是有關交通運輸主管機關應該及早妥善監理的課題之一。

這是台北市目前的試驗計畫……

<https://www.facebook.com/136845026417486/posts/2536265369808761/?sfnsn=mo&d=n&vh=e>

陳瑞麟 Reh-Lin N. Chen

多謝 David 的提早預警觀點，這些我們在美國的自由商業競爭帶動科技的環境下，還沒聽到這些觀點！不過美國也是有法治的國家，將會如盟分兄所講的，會由監理條例和其它法規來管制和約束不法和不公平的行為和發展。就如 SpaceX Project 一樣，有聯邦、州及地方政府參與發展相關科技。也多謝盟分兄分享的台北自動公車的進度。辛苦了！

JamesC 焦國安

我同意大威兄的論點。大陸強調的 Internet + 物聯網加的政策，造成了一群搞物聯網的年輕人把共享單車弄的風生水起，可是他們完全忽略了共享單車對於有限的道路空間的非理性無償使用，而造成了人行道交通擁堵、市容混亂、視覺污染的問題，讓其他的非共享單車使用者買單所造成的社會成本。

「物聯網 +」以物聯網為核心，加上領域應用，而忽略了問題的本質，是某一領域產生的問題需要處理。

「物聯網 +」從技術角度出發，不重視、甚至沒有領域專家的參與，當然會出現在大陸共享單車在每個城市造成嚴重的問題。

因為他們使用「共享」之名，以科技手段，進行框錢、擴展行動支付生意之實。他們完全和「共享」沒有一毛錢關係，可是能夠騙到包括孫正義軟銀的錢，是他們超人厲害的地方。

類似的例子包括 Uber 之流的所謂共享汽車，及 WeWork 的共享工作空間。現在連孫正義都看出了這些用科技新創為名，共享為理念的騙人把戲。

應該改成「+ 物聯網」才對，如「交通 + 物聯網」、「醫療 + 物聯網」、「環境 + 物聯網」。還是要回歸某一領域問題的本質，如何用新科技的智慧應用來協助處理，使得更有效率、更環保、更永續、更節省成本。

所以大威兄的論點是從專業領域出發，而不是由科技出發來忽悠政府或是人民來買單他們的新產品。

鍾慧諭

我認為自駕車發展是趨勢，但太樂觀。專有路權的捷運系統發展百年，台灣到去年才有第一條自動駕駛的捷運上線營運，今年底第二條自動駕駛捷運線是台中綠線。但近 5 年資通訊快速發展，大家預期 2025 自駕車上線營運，我認為太樂觀。倒是最近工業廠區、機場貨運的自駕車發展，我認為短期較可行。

另外呼應 David 提及新創發展未兼顧長期運輸政策，這也是各國在爭取未來市場競爭力與配合長期運輸政策需要權衡方向。我很認同此影片所闡述的理念，

<https://www.youtube.com/watch?v=DeUE4kHRpEk>

自駕車發展必須應用在共乘服務，否則不用停車的自駕車，就如同空車計程車，將衍生過多空駛里程與車輛，則將是另一場我們不願意見到的情境。

各種新創服務第一衝擊就是計程車，如何在服務轉型過程，重新思考都市規劃、分配所得，是城市規劃師不斷面對的課題。

JamesC 焦國安

Here is the English version of my response to David's comment on technology vs problem solving.

I agree with David's argument. The mainland's emphasis on the "Internet +" policy has caused a group of young people who were engaged in IoT to make bicycle sharing very popular in China, then to Taiwan and many cities worldwide.

Unfortunately they have completely ignored the irrational and free use of shared bicycles for limited road space. The social costs of sidewalk traffic congestion, chaotic city appearance, and visual pollution have caused other non-shared bicycle users to pay for the incurred costs.

"IOT + " takes the Internet of Things as the core, plus domain applications, and ignores the essence of the original problems, which were problems that need to be addressed with field professionals.

From the technical point of view, "Internet of Things + " does not pay attention, or even does not involve the participation of domain experts. Therefore, it is a given that bicycle sharing in China will cause serious problems in each city.

They use the name of "sharing" with technology ideas to attract investments and expand mobile payment business.

They have nothing to do with the term "sharing" from the sharing economy. But the fact is that they can swindle money including Sun Zhengyi of Softbank, which is where they show off their strength.

Similar examples include the so-called car sharing of Uber and WeWork's workspace sharing. Now even Sun Zhengyi sees these deceptive tricks in the name of technological innovation and sharing as the concept.

It should be changed to "+ Internet of Things", such as "Transport + Internet of Things", "Medical + Internet of Things", "Environment + Internet of Things". We must return to the essence of the problem in a certain field, how to use the smart applications using new technology to assist in

address our existing problems, and to make it more efficient, more environmentally friendly, more sustainable and more cost-effective.

Therefore, Dawei's argument is from the professional field, not from technology to fool the government or the people to pay for their new products.

One example I can share here is a GM of a high tech company told me proudly that their engineers developed adaptable traffic signal system in house. I was very surprised and asked who were the transportation professors or experts they work with to develop such a system.

Guess what? The GM was so proud that their computer engineers developed the whole thing internally without working with any outside transportation experts.

That says all on the issues we discussed above.

MF 歡迎學孔教授！

Alice Kuo 這麼熱情,我們這裡的情人節已過,下次送花過來,要一百朵玫瑰花,哈哈! (Dr. Chang's warming stickers):

Mike Houh 霍雲翔

哈哈哈哈哈，ICTPA 網站果然熱鬧，我看不出來說話不行了。

- 1) 先向 Jimmy, Peter, 啟興、立宏各位前輩問好。
- 2) 再向台灣的「大咖」致最大敬意。
- 3) 也跟香港朋友問候。
- 3) 我下午會和劉俊嘉，張金琳，傅崇基一起打球。會向他們報這個 Line Group 的消息。他們是否加入我不敢說，老傢伙們脾氣怪怪，我也差不多。
- 4) 我在 DC 的公司 PSI 仍在，生意不錯。除了道路設計，CM；我們反正抱著號誌，交控和安全不放，有經費，有朋友就有飯吃。

我已快一年不上班、不管事。詳情你們要去問 Allen, 我只做地主收租。

有學孔和大威兄在台比，小熊在台南，大家已經成局不怕沒有話題。

Alice 請繼續努力，Group 每加五個人我一定來問候，捧場。非常高興知道大家消息！

Alice 妳做中翻英吧，我寫不動了，還要出門打球！

Luke Cheng 鄭立宏

Mike, 太客氣了，小弟我怎麼會是您的前輩。歡迎👏。

陳瑞麟 Reh-Lin N. Chen

Hi James, When you mentioned recently about GM has developed its own Adaptive Signal System without professionals helps. I am curious about what the employee has claimed to you. I suspect what he/she meant could actually be what so called “Connected Vehicle Technology” in Europe and USA. Each of the major vehicle manufacturing companies has tried the best to fight for this market in the regions. Adaptive Signals can be integrated into the Connected Vehicle Technology. But Connected Vehicle Technology may not equal to Adaptive Traffic Signal System developed by Traffic Engineering professionals and industries. Please compare at least two Connected Vehicle Technologies of Audi and GM below:

Audi Connected Vehicles

<https://www.audiusa.com/technology/intelligence/audi-connect>

GM Connected Vehicles <https://www.gmfleet.com/connected-vehicles>

陳瑞麟 **Reh-Lin N. Chen**

City of San Leandro before I retired, we signed a contract with Audi’ s contractor TTS (Traffic Technology Services) to allow Audi vehicles to communicate with our traffic signal system.

Alice Kuo

OK, Mike, No problem. Who cannot read Chinese? Report to me immediately, I will send you to Chinese school for re-education, or use Google later ! 省得麻煩!

JamesC 焦國安

What he meant was an adaptive traffic signal system that was derived from their license plate recognition system. Unfortunately they have a very strong engineer’ s ego and believe they can do everything to concur the world....haha

Old P

@Alice, please note that there is no need to translate Chinese into English if just for me. I can still able to read and understand both traditional and simplified Chinese. Thanks for the consideration. (Good, you pass the text, no need to re-educate, Peter.):

JamesC 焦國安

They are part of the trend that most of the giant IOT companies spent NT\$3-4M at 3-4 years ago trying to enter the “smart” market to move from their low profit margin traditional hardware business.

However, they had hard time to transform because of the new units were formed by 3-400 engineers who are great on device design, but usually don’t have a clue on real application needs.

They not only look at things from their engineering views only but also focus on how to sell their devices/products as the top priority. Problems solving and the impacts on social or urban issues are not really their concerns.

Alice Kuo

我祇是隨便說說而已. 如果你的談話內容是切入 AVT 的相關問題,就請諸位拷備(copy)到記事本 (notes)或 file 檔案夾裏,以備後來者參考对照。

Tue, 6/9/2020

Alice Kuo

Wonderful, Vincent welcome! Sorry, I missed you last time in Guangzhou. I hope everything is going well with you in HK, besides current political situation.

Vincent Au

Alice I've been 政协 for 20 years that it's actually harder in the earlier years when the anti-sentiment was common. With blessing what the government had done and achieved peoples' perception changed over time and see them doing things right with visual results. That make a lot more people on the same side in these days, in terms of their thinking and political stance.

Alice Kuo

很珍惜我們在 LINE 相會的緣份。喜歡低聲吟唱徐志摩的偶然: 我是天空裡的一片雲,偶爾投影在你的波心! 你不必訝異,更無須歡喜,在轉瞬間消滅了踪影。你我相逢在黑夜的海上,你有你的,我有我的方向,你記得也好,最好你忘掉 在這交會時互放的光亮!

Peter (Chen)

@Alice Kuo My understanding is files are not permanently kept in Line group but are kept in your phone/computer locally. When someone sends a file to group, the file has been kept in "Files". For example, I can see a chat history file sent by Dr. Qiao two days ago in "Files". If you open it, it is saved in your phone. If you don't open it, after couple of days, it will be expired and you could not open it anymore. I try but find I can't add files in Notes or Albums but only photos and writing notes. We need to find a better way to keep files/documents. Maybe save files somewhere in cloud and post links in group.

JamesC 焦國安

Click files icon and you will be able to go to your file source either on your cell phone or your cloud storage locations

There is a deadline for each file saved. Alternative is to save to Keep.

Alice, you may want to consider to setup a google/Dropbox folder for this group to share files or pics. One can upload a file to the cloud folder and share the file link here.

Alice Kuo

Well, this is sounds like mission impossible! Let me try to find different way to save our discussion materials. For now, I am going to post it on ictpa.org website for keep sake, so we won't lost our materials. Thanks.