

The thing about ...

# Carl Im

The brains behind eYulchon talks to Patrick Dransfield about his algorithmic approach to corporate risk management.

**How did AlgoCompliance come into being and how does it differ from other compliance software solutions in the market?**

We had the idea of eYulchon from as early as 2014. Back then it was primarily envisioned as a cheaper, faster and more accurate way to deliver our services. In 2015, I was at a Volcker Rule seminar and it was quite clear that what mattered to the 80 front-office people there were concrete operational issues. So when the anticorruption law was implemented in Korea, we made a mobile application with 4 million specific scenarios. AlgoCompliance is the latest generation compliance technology. It is a scenario-based multi-lingual system that frees the client from having to explain regulation to software developers. eYulchon lawyers can create the digitised version of the relevant standard operating procedure (SOP) and the rest happen all automatically.

Several features make AlgoCompliance unique.

First, it's a system that lawyers can directly re-configure to keep up with changing regulation. It's also a system that gets the local regulations right. Other systems must be re-configured by developers, risking "lost in translation" problems. Because of this, many multinational companies try to manage on a global basis.



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Second, it is a compliance risk management system at its core. As such, it is a scenario-based, cross regional/multi-language collaborative workflow system. Most other systems are borrowed from existing BPM [business process management] systems. Real-time validation is a constant reminder to the first-line-of-defence users on what is acceptable behaviour. This makes periodic education basically obsolete.

This past June, I had the opportunity to compare notes with other legal engineers in London and then in October I visited MIT’s Computer Science and Artificial Intelligence Laboratory (CSAIL) to ascertain the level of our technology in a global context. It was gratifying to realise that our colleagues find our approach compelling and relevant.

**What innovations allow you to ‘get the local regulations right’?**

Two technologies stand out. First is LegalPad. It allows the local leadership to capture the relevant regulation correctly. Currently systems are designed centrally back home and distributed to regional offices. By contrast, the regional leadership takes a bigger role in localising the SOP in the case of AlgoCompliance.

Second is the multilingual scenario-based audit trails. Multilingual firmwide collaboration means that local sales describes their activities in local language, but anyone globally can double click on the scenario and can understand it in her local language.

*I like to think (it has to be!) of a cybernetic ecology where we are free of our labors and joined back to nature, returned to our mammal brothers and sisters, and all watched over by machines of loving grace*

*Richard Brautigan, All Watched Over by Machines of Loving Grace, 1967*

**What other products can you share with us that will delight in-house counsel and their stakeholders?**

As I mentioned, I just had the privilege of visiting MIT’s CSAIL. Initially, it was to incorporate some of the latest AI techniques into our decision support applications in relation to labour laws and cross-border tax issues. Some of our work will be published as academic papers co-authored by the eYulchon team and our distinguished colleagues at MIT CSAIL.

**Why do you think the approach to legal software solutions you have implemented at Yulchon is different to similar attempts by other law firms?**

One fundamental problem with the technology and related service associated with traditional law firms is that the deliverable, say a compliance system, once delivered, is very costly and difficult to re-configure. That is because the mindset behind the products always comes from the law firm side, not the client side, so it is only to be expected that the first version is not ideal. We at Yulchon began with a very different approach: We developed a system that a non-programmer lawyer can re-configure. Everybody says “build things from the clients’ perspective”, but clients find it difficult to articulate a perfect solution when everything is in abstract. However, when the eYulchon lawyers were able to re-configure and deliver incremental changes to the initial version, it empowered the client to use her imagination to ask, “Oh, that’s possible?! If that is possible, then can you do this as well?” and articulate a more bespoke solution to her needs. Without this agile approach, many clients can tell that the deliverable is not quite useful yet (eg, scaling up and operationalising the new Markets in Financial Instruments Directive or General Data Protection Regulation), but are not able to articulate how to get there. The virtuous circle is this: empowered client can envision a way to close the gap between the solution and the realistic scenarios; eYulchon’s lawyers meeting that vision in turn empowers the client.

**Does your concept of the relationship between humanity and AI square with the optimistic vision of the Brautigan poem All Watched Over by Machines of Loving Grace?**

It turns out that fact is stranger than fiction in the land of AI. What we have experienced so far is neural network-related results suffer from the risk of unintended biases. In fact, unbiassing AI is emerging as the new hot topic of the 21st century. We at eYulchon try to sidestep the whole issue by focusing on techniques that are bias-free. This was the reason for my visit to MIT.

I have coined the term AI Level 0, 1 and 2. Level 0 deals with optimising man-made systems, such as training a robot to get a perfect score in Mario-Kart, or even in the game of Go. This will all be done by machines very soon. Level 1 deals with asking man-made questions about stuff that are not man-made. An example is “Can you predict whether the bee will land on this flower or not?” It should be easy, right? After all, you just take videos of millions of flowers and feed the data to Alpha Go and you’re done. Well, it turns out that the video data is meaningless because bees see flowers in ultraviolet and the data we just fed the machine was shot with a regular camera. Garbage-in, garbage-out. So we need to know if the data we are about to feed to the machine is garbage or not. This is a pretty difficult task, it turns out. There are some indications that AI Level 1 problems may be exceedingly difficult. We at eYulchon aim to master AI Level 0, and try to champion AI Level 0.2, for example.

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Photo: Patrick Driansfield

**Richard Feynman was still teaching at Caltech when I was an undergraduate there. He taught me that being a geek can be cool**

**Your career spans the Asian financial crisis; how did it affect you and how did it change the business environment in Korea?**

My career in fixed income can be characterised as a global legitimisation of Asian credit. As the Asian financial crisis of 1997 was beginning to catch fire, I got a call from my boss's boss in New York to shut down most of my positions with Asian counterparties. None of the counterparties mentioned went on to default. That experience became a data point for arguing that there should be a more localised approach to Asian business selection.

The crisis was a necessary step for South Korea to become a more mature market. It turns out that the amount of knowledge one needs to be a good risk manager is more than one can experience in a lifetime. You have to respect the market because the truth is that there is no neat way to control it. Suppose you get a report from your junior traders that all of your greeks are flat. Guess what? You are still exposed to reputational risk, document mismatch risk, counterparty risk and so on. Market reform in Korea was accelerated because of that painful experience.

**Who is your mentor?**

Richard Feynman was still teaching at Caltech when I was an undergraduate there. He taught me that being a geek can be cool. Lloyd Blankfein, Richard Witten, Pete Gerhard and Danny Yee were my benchmark during my fixed income days.

**What is your hinterland?**

I am big on education as a vehicle for transmitting culture. Having an inspiring teacher or peer can change how you think and approach the world. Every employer is looking for young people who are going to make a difference. In order to make a difference, knowing what everyone else knows is less important than seeing what people don't know. There is not enough emphasis on this in the current environment of quick answers.

Carl Im makes augmented intelligence applications. As the founder and the CEO of Solomon Strategic Consulting, he has developed and patented an algorithmic approach to corporate risk management. As a senior adviser at Yulchon, he has been driving Yulchon's digital strategy, including the firm's new website based on the principles of "content-driven marketing" and "your business your way".

Carl combines over 20 years of sales and trading experience in fixed income, has a doctorate in physics from Stanford University, and he was a member of the Caltech Putnam team. His unique background as an academic, a banker, and an entrepreneur has contributed to unique perspectives and approaches that have won numerous awards. His work has won the Asian Technology and Innovation Initiative of the Year, the Asia-Pacific Innovator of the Year, and the In-House Community Visionary Firm of the Year.

Carl's work at Yulchon is published under the eYulchon label. The eYulchon team has recently delivered the first Universal Compliance Engine, which empowers in-house compliance and legal officers to produce, completely on their own, mobile compliance apps for firm-wide use. Under the Universal Compliance Engine paradigm, a compliance officer can modify a policy, drag-and-drop it, download the new compliance app, see it in action, and modify again, closing the gap between the policy and the practice of compliance.