

PEOPLE OF COM DEV

DR. MING YU, OUR CHIEF SCIENTIST

Written by: Patty Attwell Autumn 2015

COM DEV's Chief Scientist and Director of R&D, Dr. Ming Yu, is THE global expert in filter and multiplexer technology. Recently he was elected Fellow of the Canadian Academy of Engineering (CAE) and is also a Fellow of the Institute of Electrical and Electronic Engineers (IEEE), amongst his many other professional accolades.

It's hard to know what to expect when sitting down to talk to the man who developed the company R&D roadmap, and principal creator of our game-changing filter/multiplexer design software and computer-aided tuning software. Ming has found ways to fine tune COM DEV's innovative techniques to an extent that dramatically improves the cost and cycle time it takes to produce many of our key products, while maintaining the exacting standards of each piece. He's an example of the kind of thinking that has enabled COM DEV to excel on a professional level and he is also an example of what has made COM DEV great on a personal level too.

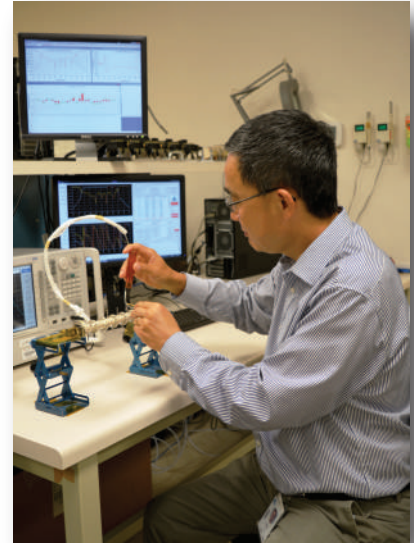
"If I need an innovative solution or just to discuss things that are out-of-the-box, Ming is an excellent collaborator. He understands the depths of core technology but he can rise above it and see the big picture, his views and intuition are invaluable."

- Tony Stajcer, VP of R&D
COM DEV International

Ming says that COM DEV is the only place in Canada he's ever worked. "I grew up here at COM DEV" he says, with a smile. "I was studying engineering in British Columbia and then I heard about this company, COM DEV, who were doing interesting things. I wrote in, explaining my skills and asking if there were any positions available. That was 1993 and I'm still here!"

As a young man growing up in China, Ming had big dreams of being a poet. He read all of the great Chinese poets and thought he was destined to be a writer. His parents, who were both engineers, proposed a more practical and less contentious career path for him: engineering was black and white - and it was a good living.

Ming respected his parents' wishes. He changed his path and ended up earning a Ph.D in electrical engineering from the University of Victoria, BC in 1995. "I never liked math but because I do it well, I kept



Dr Ming Yu, COM DEV International's Chief Scientist demonstrates one of his innovative software programs.

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going.” He explained. “I think there have always been advantages to the fact that I’m not a typical engineer. I see things more in pictures than in equations. I understand complex theory but I am comfortable moving between the worlds of science and the arts. It comes in handy when collaborating with universities.” He is also an Adjunct Professor at the University of Waterloo.

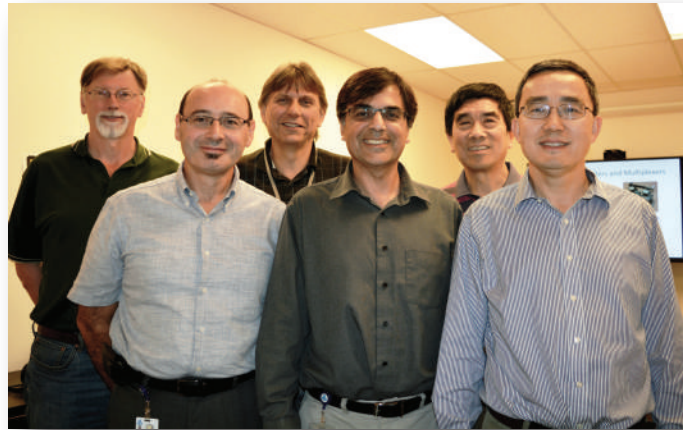
Joining COM DEV in 1993, while still working on his Ph.D, Ming started in an entry level role as a member of the technical staff in the Multiplexer business unit. From there he worked in a succession of increasingly senior roles.

Over the last two decades Ming was the principal creator of the current filter/multiplexer design software suite which led to the direct flight production of Mux’s, eliminating the need for breadboards. He is also the principal creator of COM DEV’s computer-aided tuning (CAT) software which led to significant cost/cycle time reductions in Mux production. Where every Mux previously needed to be fully

hand-tuned by someone with 5 to 10 years of tuning experience, his software allows the majority of the tuning to be done via software, with only a small part of the process now requiring a tuning virtuoso’s hand.

He currently leads a team of R&D engineers to oversee the development of our next

generation of products and technologies, including: high power and miniaturized filters and multiplexers, electromagnetic based design and optimization tools. Ming holds 14 patents and has numerous publications.



In the photo above, the Development Team get together for a group shot. Left to Right: David Smith, Antonio Panariello, Van Dokas, Bahram Yassini, JingLiang Zheng and Ming Yu.

His road was not always easy but he showed a particular brand of enthusiasm and perseverance in all things. When he arrived at COM DEV he was still working on his mastery of the English language. Ming says, chuckling: “I learned more English here in the lab – both good and bad! Sometimes the guys would make bad jokes and because I’m very competitive, I worked hard to come up with an even worse joke back. They realized they created a monster!”

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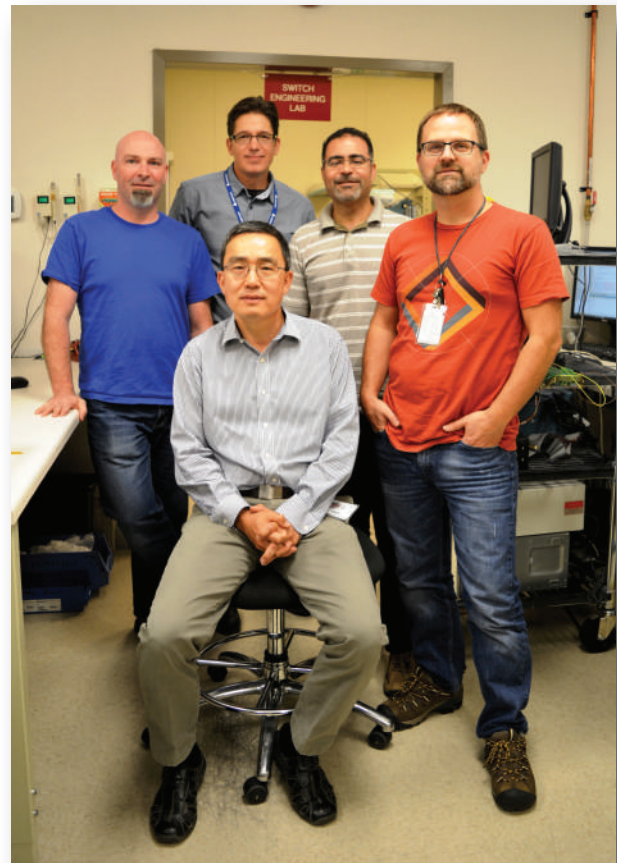
“In my mind, Ming embodies what we look for in a leader at COM DEV, as he is not only technically brilliant, but he is energetic and enthusiastic about working collaboratively with those around him to achieve great results.”

– Mike Pley, CEO
COM DEV International

That same drive that makes him an expert in his field also shows up in his golf game, which he admits, is still a work in progress. He becomes animated when he describes how he sets about becoming the best golfer he can be. “I try to do the best in all that I do. When I began, I was way behind the other golfers I was playing with and I knew I needed to find ways to be better. So, like any other problem, I started reading books. I read all about the physics of centrifugal force in golf. I studied the issue of my golf game like a scientific problem. When you look at any problem strategically it is easy - tactically it is hard.” Ming looks at me very seriously and says: “You know what I learned? That common sense in golf is always wrong!” This reminds him of one of his favourite sayings: “Fail, fail again, and fail better.”

I honestly doubt that he does much failing, given his ability to come at a problem from every angle. This incessant drive to find innovative solutions and push the boundaries of the possible has helped COM DEV become a global leader in the aerospace sector.

But Ming sees it a little differently. He humbly explains: “This company gave me the platform to excel. I owe them a lot. People throughout our industry show me respect because I represent COM DEV. This field is narrow but I’m considered one of the top filter experts in the world – thanks to my career here.”



Current and Past CAT Software team members. Clockwise, Left to Right: Peter Donahue, Ed Vankalsbeek, Mostafa Ismail, Steven Weber and Ming Yu (front).