



## RTT TECHNOLOGY TOPIC November 2011

### Making Smart Phones Work (2)

This is the second of a series of Technology Topics in which we review the technical and commercial dynamics of the smart phone supply chain including semiconductor and RF component vendors, device vendors, infrastructure vendors, operators and end users.

The announcement of the [Lumia phone from Nokia this month](#) demonstrates how far and fast the smart phone market has developed; a highly desirable consumer electronics device with an 8 megapixel camera, HD video recording at 30 frames per second, satellite navigation, mapping and pre-installed public transport information for 460 cities. Unlike some of its competition it probably also works well as a phone.

But however impressive, it is always useful to put contemporary product announcements into historical context. Today (2<sup>nd</sup> November) is the seventy fifth anniversary of the world's first regular high definition TV service from Alexandra Palace high on a hill in Haringey so let's use that as our start point.

Background on the anniversary can be found [here](#)

An RTT article on broadcasting history can be found [here](#)

Science Museum resources on the same topic are available [here](#)

This in turn reminded me of another anniversary, the 70<sup>th</sup> anniversary of Motorola which was held in Chicago in 1998 which I was very privileged to attend (as were my colleagues Herschel Shosteck and Jane Zweig who were the reason I was there).

Even more fortuitously and probably accidentally I ended up sitting next to Bob Galvin at dinner. His father Paul had founded the business in 1928. Bob had become a Director just after the second world war and in 1959 became CEO running the company for thirty years and turning it from a \$290 million US centric business to a \$10 billion dollar turnover global giant.

Motorola is of course known to most of us as the two way radio business that morphed into a cellular manufacturing business but for much of its history it was also the world's biggest and arguably most innovative TV manufacturer introducing the first 19 inch 'portable' TV in 1960 and the first 'truly rectangular' colour TV in 1963 – the world's largest TV manufacturer making the world's largest TV's.

I asked Bob what had been one of his hardest decisions and he said without a doubt it had been the decision to sell the TV business to Panasonic in 1974.

In retrospect this decision made complete sense. Working at Philips in the late 1970's I remember a strategy meeting where someone pointed out that Philips had twenty one factories producing TV tubes but that Toshiba were producing more than us per day from a single site. The world had changed. Motorola had realised that five years before and being a family run business could take a hard and quick decision.

The follow on question of course was what was the secret of Motorola's success other than the ability to make fast and sensible decisions? The unequivocal answer to that was focus.

The 1974 decision had not just been about production economics but the need to focus R and D resource on new opportunities. Motorola's decision to target the cellular phone industry before the

industry even existed was remarkably prescient and provided the basis for three activities, the semiconductor business, the cellular handset business and the cellular infrastructure business which together powered Motorola's growth in the last two decades of the 20<sup>th</sup> century. The \$100 million investment in the China market in 1987 and the six sigma quality scheme also made a significant contribution to Motorola's success.

Bob retired from the board in 2001 and his son Chris was CEO for a while but then ousted. The two subsequent CEO's who we will not name check for obvious reasons failed to comprehend the importance of the need to focus and the need to control quality that were essential to maintaining global market dominance.

Motorola became all things to all men, supporting every flavour of radio technology including WiMax and every possible software platform option, failing to take into account the opportunity cost associated with what proved to be disastrous diversification. The company then failed to ink a technology and production agreement with Apple on a significant new product (the iPhone) that Apple announced in January 2007 and then disbanded the China R and D team that had developed the original user interface concept.

Faced with mounting losses and with no product in place to follow the temporary and US centric success of the Razr, Motorola then started to outsource design and manufacture and ditched the six sigma quality programme. Despite strenuous efforts by the recent management team to refocus the business, the damage inflicted by two CEO's neither of whom had prior experience of the industry proved to be fatal at least for the handset business which is no longer an independent entity. The new [Razr product](#) may be a route to resurrection but it will be a long haul back to base.

It is an odd and sad coincidence that Bob Galvin and Steve Jobs are no longer with us, both having died in October.

There have been various forum discussions as to which of them had the bigger impact on the mobile phone industry but this is a comparison that is neither useful nor appropriate. Industry commentators talk about their ability to read the market ahead of the competition but this is unconvincing. I suspect that both of them had an intuitive understanding of technology opportunity and the process by which technology value can be translated into market and business value through the application of rigorously focused engineering effort. It is not listening to what people say they want but understanding what they really need and how technology can meet that need.

Both Bob Galvin and Steve Jobs leave a huge and positive legacy. Motorola's radio engineering innovation in the 1980's and 1990's laid the foundation for the present generation of RF devices, user devices and network products. Apple's user interface innovation over the past five years has transformed the way that we interact with these devices and networks. Both of them made an enormous contribution to the present smart phone revolution.

In a way it is encouraging that even in a trillion dollar industry personalities remain important. Smart phones need smart people. At the end of dinner, Bob Galvin turned to me and said 'I'm just a regular guy who just understands what needs to be done'. Regular perhaps but really rather exceptional.

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### **About RTT Technology Topics**

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