



RTT TECHNOLOGY TOPIC July 2014

The Wireless Watch- Time for a change?

In our 2012 book Making Telecoms Work, (see the latest review in the IET Journal) <http://www.rttonline.com/documents/Review-IEEE-ComMag.pdf> we discussed how smart phones were evolving to allow us to interact with the physical world around us.

In this month's technology topic we review progress with body worn sensing and the role this is playing in adding value to everyday life.

Our interest is specifically body worn 'wearable wireless' devices – new generations of wearable products made possible by advances in sensing technology, noise reduction algorithms and processor and RF efficiency improvements.

Practical examples include the recently announced G Watch, plausibly the next wave of added value realisable from the smart phone revolution.

<http://www.theguardian.com/technology/2014/may/27/google-summer-launch-g-watch>.

Market opinion is divided as to the likely success of these devices.

There is however much to be learnt from a study of the traditional watch industry.

The story starts in 1541.

Read on.

1541 was the year in which the Calvinists prohibiting the wearing of jewellery. Jewellers and goldsmiths had to find something else to make.

The answer was the pocket watch, the perpetual watch (invented in 1770) and the wrist watch. <http://www.fhs.ch/en/history.php>

A review of the history of the watch industry over the last 500 years suggests a number of technology and market lessons with relevance to the presently emerging smart phone 'wireless watch' market.

The watch industry was transformed by mass production techniques introduced in the 18th century with Calvinist Switzerland at the heart of the manufacturing revolution. By 1790 Geneva was exporting 60,000 watches per year.

In 1842 Adrien Philippe, one of the founders of Patek Philippe, invented the pendant winding watch and watches with special features including perpetual calendars, the fly-back hand and chronographs.

<http://www.watchtime.com/reference-center/glossary/flyback-chronograph/>

The introduction of the wrist watch after the First World War and the world's first self-winding wrist watch in 1926 marked the beginning of the first generation of truly wearable wrist worn devices combining function and fashion.

The introduction of electrical watches in 1952, a product of Second World War technology innovation marked another step function change as did the world's first quartz wristwatch introduced by the Centre Electronique Horloger (CEH) in 1967.

Within 15 years this invention had all but destroyed the Swiss watch industry. This near death experience and the second coming of the industry is documented on the Swatch web site

http://www.swatch.com/zz_en/about/history.html

In 1983 Nicolas G. Hayek came up with the concept of a 'second watch' — not an expensive piece of well-crafted jewellery, but a way to say who you are and how you feel.

In 2006, Swatch celebrated the production of the 333 millionth Swatch watch.

Interestingly the success of Swatch reinvigorated the traditional mechanical craft made watch industry - a triumph of vanity over common sense which John Calvin would have found deeply disturbing.

The practical outcome is that the watch industry is in remarkably good health with products that span a few dollars to a million dollars and more.

A million dollar watch



<http://www.watchtime.com/blog/million-dollar-watches/>

The impact of sensing devices and 'the wireless watch' on this market is as yet uncertain but will provide a fascinating case study of the often unexpected impact of technology change on global market value. Just consider a few of the products that have recently come to market or have been pre announced.

http://www.trustedreviews.com/samsung-gear-fit_Gadget_review

<http://www.sonymobile.com/gb/products/smartwear/smartband-swr10/>

http://www.trustedreviews.com/lg-lifeband-touch_Gadget_review

http://www.trustedreviews.com/nike-fuelband-se_Gadget_review

<https://www.fitbit.com/apps/fitdatasync>

<https://www.yahoo.com/tech/report-apple-iwatch-will-monitor-your-exposure-to-82097688623.html>

All of these devices are premised on the present 'fashion for fitness', an assumption that we are becoming progressively more obsessed by our personal physical well-being – pulse rate and blood pressure as the new vanity metric.

We can at the least expect a surge in pharmacy sales and it must be a good time to invest in ice pack and energy drink manufacturing.

Mind you it is nice to know what the time is and my personal bet is that the watch industry will weather this new technology storm. Only time will tell the true value of the traditional time piece.

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http://www.rttonline.com/tt/TT1998_008.pdf

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