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Design

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Where does TTPCom fit for Motorola?

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Where does TTPcom fit in for Motorola's mobile phone plans? The answer to that question, and why the US giant has paid £103m for the Cambridge-based development firm can be summed up in two aspects of handset design - low-cost and convergence.

Since the late 1990s TTPcom has carved out an international reputation as an innovative thinker in mobile communications handset technology and as a developer of reference platforms based on proprietary software and silicon.

But it is TTPCom's ideas for low cost multimedia handsets, which can be mass-produced for both developed and developing mobile markets, that has caught Motorola's eye.

The US firm already knows a lot about TTPCom's capabilities. **Last year it licensed the Cambridge-based developer's Ajar applications** platform for 3G phones which is optimised for rapid design cycles and low cost mass market mobiles.

TTPCom has already developed a reference design for a sub-$20 handset to be sold in emerging markets.

The firm's design platform combines an applications framework for development with a suite of third-party applications which are pre-integrated into the design to reduce development times.

TTPCom has claimed that by combining a software interface layer with established tools and around 50 pre-integrated handset applications the design cycle for a mobile handset can be less than four months "from a standing start".

Clearly Motorola decided this is a technology which is key for future mass market development and now it owns it.

TTPCom's other big idea is a cost effective way of converging W-CDMA 3G mobile handsets with Wi-Fi and WiMax wireless LANs and even digital TV.

To this end, TTPCom has developed a unique type of **mobile phone architecture** which ensures a clean separation of the various access technologies such as as W-CDMA, Wi-Fi and DVB-H from IP transport protocols, effectively creating a multi-standard handset.

So TTPCom has the right combination of software and silicon skills to help Motorola in its own plans for a new type of converged handset that incorporates voice, data and TV. The UK firm's architecture for converged devices supports the following standards: IP Multimedia Subsystem (IMS); DVB-H; Bluetooth; WiFi (802.11x); GAN/UMA; A-GPS; FM Radio.

It now seems likely that TTPCom was preparing the way for today's acquisition when it sold its GSM/GPRS mobile phone modem software business to Analog Devices earlier this month for $23m.

TTPCom has a large number of W-CDMA and EDGE technology licensees including some of the market's biggest chip firms such as Intel and Analog Devices. It is likely that Motorola will continue to support this royalty business, but it is less certain whether it will seek new licensees for TTPCom technology in future.

That raises another question. Does Motorola see TTPCom as a technology asset to be kept in-house or licenced to silicon partners? What is certain is that there is a fair chunk of TTPCom know-how which it will want to keep to itself in future.

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