

The Next Big Thing?

An essay by T. Gilling

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Many of the technologies that are now integral parts of our modern lives were considered, just a few short years ago, to be revolutionary and exciting. Now, those exact same technologies seem mundane and boring. Consequently, there is a lot of discussion on what The Next Big Thing might be.

Of course, the next big thing could be anything; an intangible, such as an idea, or a tangible, such as a new device. Many people naturally assume that the next big thing will be a device. It is, after all, a perfectly reasonable assumption to make, given the far-reaching impact that devices, particularly smart-phones, have made over recent years, but that assumption may, nonetheless, be incorrect.

Why? Because next-generation communications¹ are expected to be highly affordable, high bandwidth, low latency, highly reliable, and ubiquitously available. A combination of attributes that has NEVER existed before in the global telecommunications space, and which will, consequently, allow personal computing (what we do with our personal computing devices) to be designed and operated VERY differently in the future.

So, the next big thing is very probably not going to be yet another device, it is very probably going to be something completely different, something that will be built on the unprecedented capabilities of next-generation communications, such as a new type of service.

¹ *Next-generation communications will start to become available around 2020, when true Fifth-Generation Mobile Communications (5G) are expected to launch.*

Let's call this new type of service a smart-service. Why? Because it is a service that allows our smart-devices to be replaced with dumb-devices, and as the 'smarts' that were previously in those devices have to go somewhere they must go into the service, hence smart-service.

A smart-service is a digital service that is provided by a remotely-located cloud computing-based data centre, which is then communicated using real-time streaming protocols over next-generation communications networks to a dumb-device for end-user access.

Smart-services provide all required data processing, which means that the device in your hand will only need to handle the most basic of tasks, namely audio-visual presentation, and the capture and communication of user-input. Consequently, that device will be very, very simple and very, very cheap.

This 'dumb' device will be, essentially, an 'interactive television', and the 'broadcast channels' that it will be used to access will provide all required personal computing functionality. Consequently, the device in your hand is going to become a wholly unimportant tool that is just 'good enough' to allow you to access that functionality and no more. It will be a true commodity. You will not just have one, you will have many. Each of which will have a physical form that is perfectly suited to its functional role. All will work the same, and all will be constructed from standardised components.

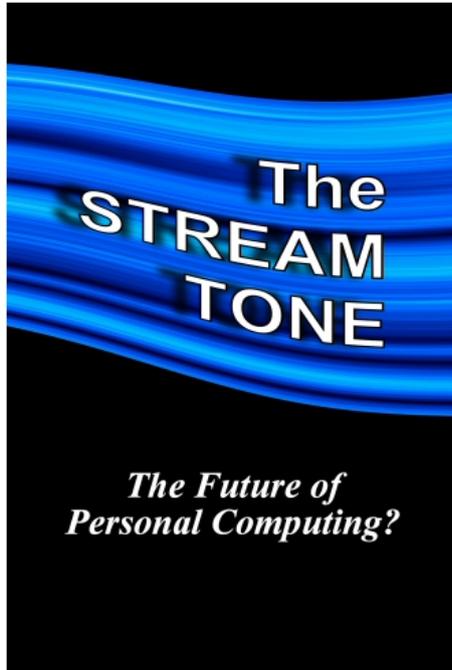
Of course, this is not a commonly held view of the future. Most people wholeheartedly believe that the personal computing device in their pocket is going to get, through the continuing miracle of modern science and technology, more and more powerful, until it is the data processing equivalent of a black hole; a supercomputing singularity of almost infinite capability. But why should it, when doing so involves so many challenges. Not just in terms of the hardware, which, as Moore's Law finally grinds to a halt, is already starting to push physics to its absolute practical limits, but also in terms of the increasingly complex software that runs on that hardware. Software that must often be developed and maintained in perfect lockstep with any and all advancements in that hardware. This is, of course, exactly how our current personal computing devices are engineered, but just because that is how we currently do such things does not necessarily mean that it is the best or only way to do such things.

Next-generation communications, coupled with mature cloud computing technologies, will offer us a different path, a better path, towards our long-promised bright and shiny science fiction future. A way for our devices to not only become simpler and cheaper, but also a way to completely disconnect the development and maintenance of all our required personal computing services from the devices that are used to access those services. The arrival of next-generation communications will permanently upend the established order of our currently device-centric world, in what should be personal computing's final paradigm shift, from smart-devices to the next big thing, smart-services.

*This essay is based on some of the concepts originally explored in my book, **The STREAM TONE: The Future of Personal Computing?***

The STREAM TONE: *The Future of Personal Computing?*

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Imagine... a world where your next personal computing device is the last one that you would ever need to buy. Where you would never need to worry about operating systems, software patches, or viruses. Where you always had enough processing power, memory, storage, and top-of-the-line graphics. Where you could access all of the very best software applications, regardless of their platform. Where you had a constant connection to all your favourite digital services, and your battery lasted for days, perhaps even weeks, of full-on use. Sounds good, doesn't it? Well, this is the world of the Stream Tone. A world that does not exist in some far off future; this could be, figuratively speaking, our world a mere five minutes from now. All that is needed to make it a reality is the creative convergence of certain technologies that are already available and in use today.

The STREAM TONE: *The Future of Personal Computing?*

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Personal computing is changing from an old world of local services, provided by local devices, to a new world of remote Web-based services, provided by cloud computing-based data centres. **The STREAM TONE: *The Future of Personal Computing?*** is a 408-page academically-oriented non-fiction book that explores, in considerable technical detail, what might be required to make a comprehensive move to this exciting new world, and the many benefits that move could bring. This book not only attempts to make a thorough evaluation of the technology ecosystem that will be required to create this future but also considers many of the implications of such a move. Along the way, it also discusses a wide range of currently-available technologies and how they could possibly be used to enable this future.

Supporting materials (errata, hyperlink-extract, etc.) now available

For further information please visit: www.TheStreamTone.com

