

Commentary from Chair - Sep 2006

There has been some energetic discussion about *openEHR* and HL7 evolution on the *openEHR* Technical List over recent weeks. David Ingram, Chair of the *openEHR* Foundation, has posted some thoughts on some of the issues raised.

***openEHR* and HL7 – some thoughts on the current discontents**

I returned from a week of sailing to discover flames leaping from the *openEHR* list server in the machine room opposite my office! I'm with many recent correspondents on the lists in welcoming the positive side of the debate whilst regretting some of the evidence of raw feelings in play. I'm sure many are wondering or reflecting on what this is all about. From my perspective, there's no need for a lot of new words about *openEHR* and HL7, *per se*, but a great need to keep hearts and minds in good shape for clarifying, understanding and learning from one another. *openEHR* is a truly open community; anyone can take its published outputs and do what they want with them; but their integrity and that of the community, brand, and methodology of *openEHR* must be protected and maintained, we believe. Please keep in mind the words that all sign up to when joining *openEHR* and its lists and downloading its materials.

That said, I know that good things can happen where extreme difference of view and even animosity is in play. I learned that from seeing a lot of the action, as a very junior committee member, in the early days of Amnesty International in the mid 60's. The offices of the then tiny, but already strikingly influential, organisation were raided by the secret police of various countries. But these events felt as nothing compared with the fights among the visionaries within the movement who were determined in quite different ways on their view of how the quest for freedom of expression under the UN Charter, on which all were united, should be framed and pursued!

'Never helps hone' is an anagram of the letters in *openEHR* and HL Seven! In my experience, an imposed drive for unity never helps hone good and enduring answers to problems; finding common mission can and does but we mustn't forget that there is strength in diversity and that monopolistic tendency may serve some interests but, equally, carry with it the potential for weakening or corrupting others. I'm writing here as someone a bit removed from the heat of the crucible of EHR implementation and standardisation, who, nonetheless, sees and hears, from colleagues and students on the front line, many inner details of what is playing out. From the policy to the practice of health care modernisation and in the creation of new health care information infrastructure, in many countries, the debate ongoing through the *openEHR* lists is becoming a central concern. That's a good thing; a very good thing. For too long the issues have been delegated or relegated unduly far from the clinical domain and into the domains of engineering and organisation. Unfulfilled aspiration for health IT has created a poker game of ever increasing stakes of ambition, resource and emotion, drawing in an ever wider range of stakeholders, to the top policy levels. Just look at the Commonwealth Fund web site in the States or view on the web the recent Public Accounts Committee hearing on CfH, in the UK.

I've been around the debate a long time and have learned that the three things that matter, as I've said before, are implementation, implementation and implementation! The problem with standardising, top down, before doing, is that one tends never to have time to do, and learn well through doing. The problem with doing, bottom up, before learning how to standardise, is that one tends to spend a lot too much time and money, creating eventual ultimate havoc of incompatible legacy. This complexity can only be reduced to tractable levels through starting again, while problems of integration remain elusive. I see the waste and despair that creates in the healthcare workforce. It's a Catch 22; I can chart five reinventions of a national programme for IT, within the NHS, in my career.

At its heart, all of this is a debate about emerging discipline, notably in medicine and computer science and at their interface. It's hard because that discipline has been sorely lacking on all sides and in their

intersections. No one's fault, really, but shameful, all the same, that through diverse confusions and confabulations, the protection of the multi-billions that are now spent on not serving well the information needs of healthcare, end up with money mainly directed, largely unwittingly, and not in any sense by stupid people, in ways that have still failed to reach or be allowed near the heart of the matter. That is where considerations of quality, information and governance intersect in providing health services that people trust and value. In such circumstances, there are problems best approached through simplifying and withdrawing resource; Fred Brooks and his concept of the mythical man-month is salutary.

openEHR has never yet had external financial support; we, our research teams, colleagues and parent organisations have done it ourselves. Of course, it has been largely ignored on high, for as long as possible, because bottom-up and top-down motivated initiative is bound to encounter an uncomfortable collision layer in the real world. That collision is occurring right in the middle of changing patient care. I have very disappointing records of how the ideas motivating *openEHR* were introduced to numerous important people over recent years, illustrating how weak the critical appraisal of health IT principles still is, in clinical, management and technical terms.

There seems to be an implication in some of the recent contributions to the lists that *openEHR* is somehow now rocking the boat. In terms of its economic weight, that really feels like criticising someone moving a deck chair on the Titanic for its demise. Incidentally, according to a recent paper, it was probably weak rivets and not the iceberg that caused the disaster. Having just been sailing, forgive me for introducing a navigational Catch 22. It's sometimes not a good idea and in no one's interest to rock the boat because it may capsize; but you sometimes have to rock the boat to learn how to build boats safely and sail them. *openEHR* and HL7 are contrasting voyages of discovery and exercises in simultaneous boat, crew and community building, in the open water. They're building new kinds of boats and learning how to sail them at the same time; that needs a certain kind of foolhardy spirit, to be sure, but innovation was ever thus. In health informatics, there are some emerging principles about boats, teams, weather and seaworthiness, but not enough is known yet to be confident about laws covering what is and isn't allowed to be a system (boat) and how they should be regulated; what and where the Plimsoll line might be, for example.

We're in a situation, nonetheless where many people, who have to get across the sea, are being persuaded to get into some pretty unseaworthy boats. That's an observation about the inner workings of systems and software, which I've observed, for thirty years. It's not a purist argument as some pretty ropey early stage software has achieved some pretty amazing impacts. But it is a comment about mission, method and maturation of sustainable infrastructure. I could give some old and some distressingly current examples of unseaworthy systems and projects, but don't want to be too provocative.

As the board of directors of the Foundation, we've tried always to keep *openEHR* itself free from being typecast by things like datatypes, information models and engineering systems, important though these undoubtedly are. Let us forget any idea that there are right and wrong answers to these issues. But let us remember that there are good and bad approaches and retain an independent sense of what is good enough or not good enough, in context. Otherwise there will be neither sustained progress nor proper regulation and governance, and its health care that will be the worse.

My perspective comes from earlier days as a physicist. Many of the models that have been at the heart of the evolving discipline of physics are in some senses both right and wrong. They help in some ways, they don't in others. They're none the worse for that.

A rigorous grip on the scope of the modelled domain and the measurements and behaviours addressed within it are essential for any modelling exercise of worth. When I was first studying physics, the vibrational spectra of nuclei were well predicted by analogy with a spherical drop of liquid and its vibrations. When you fired protons at a large nucleus and observed fission and the emission of a whole host of new particles, you were nowhere near modelling these starting from the analogy of a spherical drop model. Getting there by further pursuing that analogy and formula was not a good way forward.

The problems of modelling the nucleus as a many-body problem in quantum mechanics have taken decades longer than the simple task in classical mechanics of calculating vibrational properties of a liquid drop. But each model had its domain and utility. Scientifically, physics didn't move forward by combining them into a single omni-domain model, just as the idea of painting a canvas by mixing all yellows and blues and thus replacing with greens also loses something. Quantum mechanics and much much more powerful computers evolved to fulfil the modelling needs of interest and relevance to contemporary experimental physics.

Since the idea of *openEHR* first came to us, we've tried always to keep clinical and health care needs and realities at the heart of its mission, in practical ways. It's hard to do. What medicine is, how it works and how one would know what constitutes good medicine are challenges identified since the times of Florence Nightingale and still at the heart of practising and managing health care. Innovation can damage and threaten stability; conservatism and vested interest can impede useful advance; that's true everywhere. If you read the biography of Stanley Prusiner, Nobel Laureate in Medicine for his work on prion disease, you will see a story of a man blocked at various stages of his career for his challenge to biological genetics orthodoxy; just as Copernicus and Galileo challenged the orthodoxies of the church of their day. Blocked tenure led onto Nobel Prize with stupefying rapidity! All scientific innovation grows in Conan Doyle's country of the blind where the one-eyed man is king. Let's try and suppress judgmentalism and treat the journey as an experimental one, guided by implementation experience. But let us be honest and free in our appraisals, confident that they will in turn be appraised in a good and fair light.

openEHR as a community has received and has sought no one's money other than from those who work directly at its heart. Its rise within the international agenda is indicative of something. I'm sure we'll stick at it, working with everyone, guided by our own perspectives, methods and ways of doing things. There is a log jam in health IT. A memorable paper claims that sorting out health care data is an \$80billion per annum problem for the US economy. In some sense, we believe that it needs to be transformed to a problem perhaps an order of magnitude less than that in monetary terms. It's hard to make a business case for saving so much money when those effectively spending and consuming it are persuaded or in cahoots that more and more rather than less and less spending of our societies' money is needed to deal with the problem. Maybe that is flames from me, now!

David Ingram, Chair of the *openEHR* Foundation
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