

This is an article based on an interview conducted by Sara Gon with Alan Knott-Craig, currently the CEO of Cell C and one of the iconic figures in the communications industry in South Africa. The article refers to some of his reflections of a life in ICT and what he has learnt about the roles of education, cellular telephony and business in South Africa. Knott-Craig gives insights that you may expect and others that you may be surprised by. Either way, they cannot be ignored.



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Reflections on the Cellular Telephone Industry in South Africa by A Key Role Player

South African telecommunications from the 1970s to the mid-1990s

In the 1970s we had world-renowned experts on telecommunications in this country. Amongst these experts were people who wrote leading textbooks on the subject. Our experts were feted around the world on the subject from the 1970s until about the mid 1980s. Then telecommunications development stagnated until the early 1990s.

The fact that our telecoms were both ground-breaking and then stagnant was for one and the same reason – telecoms were in the hands of a monopoly, Telkom. Monopolies *per se* are not necessarily a bad thing particularly when an industry starts evolving. But once the industry has stabilised, competition to the monopoly must be allowed to develop.

Telkom was very well regarded technically. South Africa was the trailblazer in every aspect from open wire routes to digital exchanges. But when the industry stagnated somewhat until the early 90s because of its monopoly, Telkom's monopoly should have been withdrawn.

The Success of the mid 90s

Then between 1992 and 1994 the Government decided to get involved in standardised cellular communication. South Africa had had cellular communication since 1986 but because of the monopolistic way it was managed, every phone cost about R15000 and there were about 15000 users registered over an 8-year period. This was not an overwhelming success!

The world had developed a European standard for cellular telecommunications by 1992. The South African Government then decided to adopt this GSM standard for two players, Vodacom and MTN who were awarded licences after a tender process,

but not for Telkom. This was a giant step forward for competitiveness. No one gave Vodacom and MTN any hope of succeeding.

The fact is, however, that they increased the number of phones in circulation in South Africa from 5 million fixed lines to 40 million cellular lines. This achievement was a success story on its own. By 1999 the highest speed one could use as an individual was about 1200 bits per second. The average individual use today is certainly better than 1 million bits per second, and achieving speeds of up to 12 million bits per second is certainly possible some of the time. No serious data user would resort to 1200 bits per second anymore.

The Failures of the 2000s

The cellular companies did a superb job until the early 2000s and then South Africa as a country failed. The Government asked the cell companies to reduce prices so that phones could be more affordable. Companies cannot be expected to reduce their returns voluntarily. For the Government to try to regulate the price to consumers is the kiss of death for investors. If the price is regulated, then returns are regulated and investors walk away.

Fortunately, the Government did not insist on the companies reducing their prices artificially, but the Government then failed to consider the levers available to it to reduce prices. Being able to roll out 40 million phones is meaningless if people cannot afford to buy them.

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Cellular Telephony and Job Seekers

There is one fundamental reason why people must be able to afford telecoms – to find employment. The spread of cellphones has made it possible for the unemployed to find jobs. And if people get jobs, then the country's Gross Domestic Product (GDP) grows. That has been shown by at least one very well researched study done by Vodafone.¹

It should be intuitive that telecoms must be affordable. Cost is critical for people without jobs to afford a cellphone. However, if the Government tries to regulate the price right down then companies will not build the necessary networks and will not provide the service. So one has to be a lot smarter about how one reduces price.

So the Government did the smart thing. It brought in the third and fourth operators, Cell C and 8*ta. But it did not do this time what it had done the first time round for Vodacom and MTN - the Government did not give them a fighting chance to beat the monopoly at the time. When Vodacom and MTN entered the market, Telkom was the monopoly and what the regulator inadvertently did at the time was put in place tools to prevent the incumbent monopoly from maintaining its dominant position. Thus Vodacom and MTN had a fighting chance and succeeded.

What the regulator did not do, despite getting this incredible penetration in a developing country at such an early stage, was use the weapons at its disposal to bring the prices down. There were plenty of studies around the world to show what stratagems could work. The regulator needed to put those weapons in the hands of the competition. The competition could only succeed on the basis of price. In 1994 that wasn't so. Then the cell companies entered based on the fact that they could get phones to everybody. Once access to a phone is achieved the only compelling factor is price. Only the new entrants could bring prices down, but not if they were poorly managed and weak, which they were.

Consequences of the last Decade

The consequences over the last 10 years is that the industry has gone from being well respected, highly ranked and world rated to “what the hell is going on in SA?” There was no point in pointing fingers at the cellphone companies. It is the role of regulators and the Competition Commission to create an environment to allow telecoms to reduce prices. The Commission has been unsuccessful in ensuring that companies drop prices. Cell C has managed to reduce prices in 5 months, but will not maintain these low prices without regulatory intervention.

The most fundamental job of the regulator is to ensure that telephone penetration succeeds and that it is affordable. In the first instance it has been spectacularly successful. In the second, spectacularly unsuccessful.

The key is the big input costs in pricing that the Government has control over. If those are removed then prices will come down and stay down. The two most fundamental input costs are Mobile Terminating Rates (MTRs) and National Roaming Rates. Both of these in South Africa are more than 5 times what they should be for the large incumbents. Furthermore, the asymmetry in MTRs that Government has introduced is the correct weapon, but has been weakly applied in the face of loud cries from the incumbents. Yet these

same incumbents enjoyed the same high asymmetry in MTRs when building their own businesses

Government knows what the big input costs are that can be cut. Government has identified the costs that can be reduced to make things viable. Why has this not been done for the past six years? The regulator has made some big mistakes. As a consequence it has lost confidence and adopted an approach that it was better to do nothing than do something that might be wrong. The regulator tends not to be praised for the good things it has done. The regulator should be encouraged to do the right thing. If it doesn't do something positive, nothing is going to change. The most fundamental job of the regulator is to ensure that telephone penetration succeeds and that it is affordable. In the first instance it has been spectacularly successful. In the second, spectacularly unsuccessful. Regulators rarely get praised, but when they are not criticised, this is always construed as a job well done. Not fair, but that's life.

The current regime is more open-minded than previous regimes. But we don't use our own intellectual capacity. There are a lot of people in South Africa who know a lot more about telecoms than people in most countries, but we don't call on this expertise. South Africans must stop assuming that everyone has an agenda or even care that they have - even people with agendas have value to add.

The Government tends to turn to complete foreigners who know nothing about our country, and take their advice without interrogating it. But we rarely take advice from ourselves. We suffer from the inverse of the “not-invented-here” syndrome.

The Korean Deal

The deal between the South Korea's largest telecoms supplier (KT) and Telkom, which has just been scrapped, would have been the second great disaster by the Government since 1994. Most commentators say that the scrapping of the deal is a national embarrassment for the Government. It points to protectionism and an attempt to keep a stranglehold of the country's communications network. The price of broadband will not fall for the man in the street and Telkom will not introduce new technology. This criticism is not justified.

The first disaster occurred when Telkom was partly privatised and entered into a strategic equity partnership with a consortium of two companies, including SBC, a U.S. telecommunications company. In exchange for exclusivity, namely a monopoly, to provide certain services for 5 years, Telkom assumed an obligation to facilitate network modernisation and expansion into underserved areas. This has not happened which is simply a disgrace.

The South Korean deal would have been no different. It would have provided quick financial wins for investors who have little to add and much to gain. The first deal proved to be so. The second was clearly another descending upon us. We need good management in Telkom, nothing else. And good management exists in South Africa. Were this not so, neither Vodacom nor MTN would have become such successful entities. It is a relief that someone in Government saw the disaster coming and stopped it. The Government should be praised for seeing the light even if it was only at the last minute.

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Productivity, Education and Literacy

The best productivity in the world is to be found in Asia. Many of those on Asian assembly lines are graduates who can solve their own problems. Our workers are undereducated, cannot problem-solve, are too expensive and are comparatively unproductive. This was said at a seminar recently and it is important that it is being said publicly; a few years ago it would not have been said at all.

One of the most problematic expectations of the young is to be parachuted into positions because of education. The key to employment is hard work, not only education. The only thing that is not respectable is not working because one chooses not to work. Education can make one a better person. It is not in itself a means to making money. Not reaching the very top is not failure!

Tanzania, compared to South Africa, has a text messaging (sms) rate of 5:1. Tanzania has a literacy rate of 94%. In order to reach the same usage in South Africa, Vodacom made text messaging free for a year. SMS traffic suddenly escalated exponentially. Vodacom kept it free through Christmas and New Year 2011 and then started charging. Usage dipped for a short period when Vodacom started charging in January, and then went up again.

During the period of free messaging, users taught themselves to read and write. And they developed text languages. So Vodacom wrote an SMS dictionary. People had learnt to communicate on machines that everyone assumed one needed to be literate in order to use, even though the many of the users are illiterate.

Communication is more important than education. One can measure the success of a country by the penetration and affordability of its cellular telephony. If people don't have phones, it's because they're not available and not affordable.

Education starts with jobs: Jobs don't start with education. For the very poor, the first need is to eat and stay alive. People who do not have jobs do not aspire to education until they are on the employment ladder. There will be little demand for education if people are struggling to stay alive. In terms of Maslow's *Hierarchy of Needs*, a person has to have met some basic needs to want. Once a person is in a cycle of development then education becomes an aspiration.

The East is developing fastest. In another 50 years the USA will look to the East and wonder what can the Americans do to emulate the Asians. Asian societies are being lifted because people are prepared to do anything. The difference between the Depression of 1929 and now, is that people then would take any job as a matter of pride.

Every time someone communicates with someone else, his or her employment opportunities increase. Cell C did not cut people off for not making calls. They were not prevented from receiving calls if they could not make a call. In a poor economic climate, a cellphone is very important because it can give a person access to potential jobs without having to travel great distances with the associated costs.

The Process of Connectivity

Companies cannot just target individuals for cellphone connectivity. In certain communities and rural areas, there has to be buy-in from the chief or leader of the community to make the provision of infrastructure worthwhile. In one rural community, Cell C was asked by the chief to provide connectivity for 11 000 people. This required building base stations in 2 communities at a cost of R5m. Two shops were opened and by 11h00 on the first day of sales, they were sold out. High speed broadband was also installed. None of this would have been achievable just by targeting individuals.

Governments fear ICT – it is easy to organise quickly and on a mass basis. It engenders a courage not normally encouraged.

In Orange Farm, a container shop burnt down because the company had not consulted with the chief. Leadership consultation has also been necessary in the various ethnic communities in Johannesburg. The product has to be sold to the communities and their leaders. Individuals can be targeted once they have reached a certain level of upward mobility.

The first areas of discretionary spending that were destroyed in favour of the purchase of cellphones were clothing and furniture. Both these areas have regained profitability again because now they all sell cellphone products and make an excellent return from doing so.

Political Implications of ICT

There would have been no Arab Spring if it weren't for communication. Whether this will be good or bad in the long run isn't certain. Even if there is a reversion to authoritarianism, these societies can never go back to the *status quo ante*. Governments fear ICT – it is easy to organise quickly and on a mass basis. It engenders a courage not normally encouraged.

In South Africa the ability to communicate came with democracy. Now, there are no secrets. There are no more myths to hide behind. While ideology can easily be generated, it can be destroyed. If governments want communication they must be sure what it is they want. In the Democratic Republic of Congo, the army threatened to destroy Vodacom's offices with a tank, because the government wanted the company to exercise its power to turn off communication.

The Unintended Consequences of Rica

The Regulation of Interception of Communications and Provision of Communication-Related Information Act (Rica) put 20 000 people out of jobs. These were the independent, small operators in rural areas. They never had the technology to Rica. Wealthy operators replaced them and doubled their wealth.

And no more is now known about the criminals than was known before the Rica process was legislated. The Government didn't see the unintended consequences.

Within 6 months of the introduction of Rica, the small operators in the rural areas had disappeared. The technology for tracking criminal activity was and still is excellent so Rica was not necessary. If a phone has to be Rica'd then phones are used and thrown away. Neither Israel nor the USA had introduced it. It adds another R60 to every connection. It is yet another input cost which provides no benefit. The big operators who now Rica people do so by the thousands. Its effectiveness has to be questioned.

We had a system where criminals never knew how we could catch them. Now with Rica we have a system that has cost thousands of jobs and criminals know how to get around the system. The system has just created another racket. Half of South Africa's 40-million connections change their number every year. The operators who Rica phones must be making a fortune. And I am not convinced that Rica *per se* has improved our fight against crime.

Governmental Impediments

The greatest governmental impediment to development is local government. Local government impinges on everything. Local government controls whether or not ICT infrastructure is built. One can wait 3 years to get permission to install the infrastructure for a network providing voice and broadband. Johannesburg is particularly bad.

There is no apparent connection between the three tiers of government. Some in government seem to think that communication just happens - that it doesn't have a cost. It needs investment to build infrastructure, create jobs and improve lives. A company will get all the permission necessary for developing such infrastructure; then finally it will need a building permit to throw concrete in the ground. But one can wait a year for a building permit to be granted by a city council. Then suddenly the city council will impose a moratorium for a year. A reason for the moratorium is never given. But then companies are forced to lay people off. All the equipment has to be returned to where it came from. Work stops and the devastation is enormous.

If one approaches national government for help, they will contact someone in local government who will agree to assist infrastructure backlog, but nothing happens. If local government is challenged with the failure to meet people's constitutional rights, they will never again do anything for the complainant, in this case the network operator.

Those local councils that are helpful usually have flourishing communities. There appears to be a perverse pleasure in preventing things from improving. The powerlessness of central government is mystifying to the outsider. Improvements will have to be made, municipality by municipality. There needs to be some agreement between the business sector and government that for a couple of years business will perform a sort of "national service" to go into municipalities to manage these institutions and train local government employees.

Municipalities, ideally, should not be political entities but professional bodies that can survive changes in political authority. Their finances should come from the national fiscus and not be allocated through the political bosses. How is it that SARS was made so incredibly efficient under the leadership of Pravin Gordhan, yet we cannot achieve the same in local government? How is it that when one deals with the Free State provincial government nothing is too much trouble, yet many other provincial governments act as continual impediments?

Attitudinal Changes

South African companies shouldn't feel that they can "sort out" other parts of Africa, until the problems of South Africa are managed. Nigeria thinks South Africa is a joke. Nigerians are better educated than South Africans. Moçambique is more receptive to infrastructure development. South Africa is in a cauldron of history. South Africa must stop blaming the past and looking backwards. Germany is ashamed of its past, but whilst it has not forgotten it, it has put it behind it and is now the powerhouse of Europe.

We have to lower our entitlement expectations. People would rather earn nothing than earn less than what they believe they're entitled to. People have to understand that they have to start at the bottom and work their way up according to their own abilities and drive. There's nothing for nothing.

NOTE

¹ Vodafone The Policy Paper Series - Number 2 - March 2005 Africa: The Impact of Mobile Phones http://www.vodafone.com/content/dam/vodafone/about/public_policy/policy_papers/public_policy_series_2.pdf