



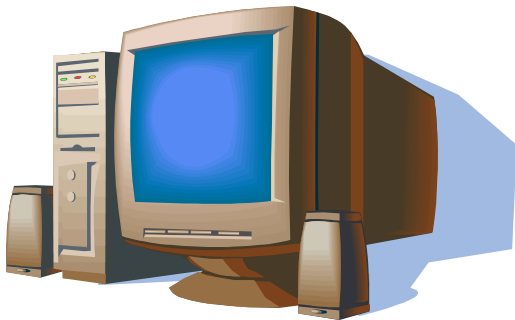
Report On Cellular Payment Systems In South Africa (By Reuel Leach)

DO you know what you are paying on your cellular bill every month. Maybe you do, but have you ever wondered what the networks costs are? Would you like to see something published on this subject? Read on. Its time that people started to get answers to these questions.

Lets start off with GSM. It's a radio signal just like any radio frequency. You have a radio? You have a television, you pay a licence which is a minimum cost to get messages (or Signals with information) to your home, office or car. With a radio frequency you choose which signal you want to pick up the messages you want to listen to or "watch".

So what frequencies are there? Here are but a few common ones:

1. Short wave
2. Medium Wave
3. Frequency Modulation (FM)
4. Wi-Fi (Wireless)
5. Bluetooth
6. GSM
7. Edge
8. GPRS
9. UMTS (3G) which consists of data for internet and 3G video calls
10. HSDPA & HSUPA
11. Infrared



Lets focus now on the formats of some of these signals. What do I mean by that? Well, you listen to a CD with music of your favourite artist and its recorded in **WAV** format. You might be familiar to the more common format used called **MP3**. Now lets make a comparison with these two formats. WAV will give you 700 megabytes over 80 minutes and MP3 gives you about 70 MB (megabytes) over 80 minutes. When you record something with your cellphone, you might use AAC or a similar format which might give you around 2-4 megabytes an hour.

The format of **GSM** is **AMR**, it could be similar to **AAC**, but this is where the interesting part comes. Lets look at the speed of these frequencies. These are true speed real life situations, not what they tell you at the shops

True Speed example in South Africa

GSM – 6 to 13 kilobits per second

GPRS 1 to 6 kilobits per second

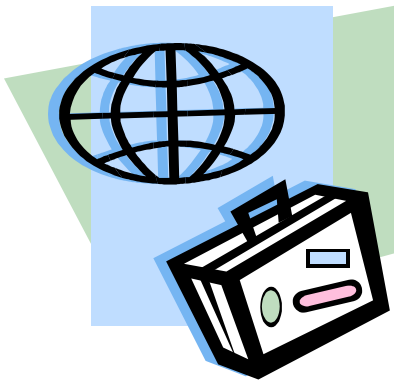
EDGE 6 to 25 kilobits per second

UMTS 30 to 120 kilobits per second

HSDPA 50 to 200 kilobits per second



But if you tried to do a voice call over **GPRS** or **EDGE** you might find it a bit choppy. Ok here is the first big issue. A voice call can be easily done one **EDGE** using **Skype** or **MSN** and the maximum you will use is around 2.5 MB an hour. At the current data rates an unbundled GPRS? EDGE? 3G connection will cost you **R2/MB** which is the most expensive DATA rate. If you use a data bundle you will go as low as **R0.19/MB** so an hours call on Skype voice to voice will cost you in the region of **R0.46** and R5 an HOUR! **But if you use your normal Cellular phone for the same time, it will cost you R90 to R180 an Hour!** So lets compare R0.46 to R180 an hour which most people are paying. Are you going to do something about this....



You should resort to these forms of technology:

Skype

MSN

Mxit

Nimbuzz

Here's the real shocker! Do you know what the most expensive form of communication in the world is. And it probably is in South Africa. It's called SMS. Yes you thought it was cheaper than a call. Think again. Here is the simple price plan comparison

Let me explain this bit by bit. 1 sms is 160 characters. That includes the spaces in between. If you type an A4 page there is place for approximately 3680 characters with a font of 10 on it. Divide 3680 into 160 and that gives you 23 sms messages. If you pay the normal day time rate it will cost you at 85 cents R19.55 PER PAGE and after hours at 35 cents an sms it costs you R8.05 so it's far more than a page.

I need to help you understand the difference between the two forms of technology. The first is the most expensive form of communication in the world. It's called SMS. The second is the most common form of communication in the world. It's called a call. The purpose of this document is to help you understand the difference between the two forms of technology.

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I have the opportunity to compare this to Skype or mxit this one page will be only 27 Kilobytes and at R2 per megabyte it will cost you R0.05 cents per page and if you are using a data bundle then it will be as low as R0.005 per page!

Ok so what does an SMS cost us per Kilobyte?
1 sms = 140 bytes = 7.3142 sms = 1kb
85 cents x 7.3 = **R6.21/kb**

What does an SMS cost us per Megabyte?
1024 x R6.21 = R6359/mb
(normal data costs between R0.19 to R2.00 per megabyte)

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What does an SMS cost us per Gigabyte

1024 x R6359 = R6 511 656 per GIGABYTE

So if you were to write or type a 2 page letter and put it in an envelope it will cost you around R2.50 to R3.00 depending on paper and stamp costs. If you had to type the equivalent in SMSs you will pay for a 2 page letter:- R39.10 so its R40 to send a letter.

No why are the networks so expensive. If technology has become so cheap, why have they not given us the GPRS SMS function which almost every cellular phone has the function of? It will cost us a few cents only. If you connect your cellular phone to a PC or had Skype capabilities you could do a full skype call on 3G or HSDPA signal for between R0.39 and R5 per hour or a video call at R2.34 and R24 per hour!



If you had to send someone a full WAV cd over the internet at R0.19 per megabyte it will cost you 700 x R0.19 which is R133.00 and that's 80minutes of music. If you spoke at the average cellular call of R2.50 (hidden costs excluded) at 80 minutes you will pay R200 for the call. Your

bit rate for the wave 8MB per minute and your cellular call is 0.360mb per minute! So the intensity and quality is much better!

I suggest that people all cut off their smss, get Mxit and Skype and call over those mediums to make calls and send messages until the networks in the future.

I reckon that Wou-daar-Kom and Empty-N don't pay more than R0.39 to R0.40 per hour for your call!
If they are paying more than that they should discontinue this old technology and give us the better faster stuff I mentioned above!