

# REPORT ON FINDINGS OF THE AMEU WORK GROUP ON TELECOMMUNICATION OPPORTUNITIES FOR MUNICIPALITIES USING ELECTRICITY DISTRIBUTION INFRASTRUCTURE

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## 1. MEMBERS.

The Telecommunications workgroup members are:

Charles Kuun	Convenor	Tshwane
Maarten van Helden	Secretary	Tshwane
Mike Champion	Member	Cape Town
Mike Gitting	Member	eThekwini
Hannes Roos	Member	Ekurhuleni
Teddy Naidoo	Member	City Power
Harden Beck	Member	Buffalo City
Mitesh Takoordeen	Member	Manguang
Peter Fowles	Member	Msunduzi
Wimpie van der Merwe	Member	Tshwane
George Finger	Member	GEDA

## 2. EXECUTIVE SUMMARY.

Since March 2003 four meetings were held during which municipal opportunities using the Electricity Distribution Infrastructure for telecommunications were discussed and debated by the Telecommunications Workgroup. Presentations on the Metro Telco idea and blueprint business plans to members of the working group were arranged. It was found that within the present context and state of the telecommunications industry in South Africa, an ideal opportunity exists for the municipalities to participate in the activities of the Second Fixed Landline Network Operator. It was concluded that this opportunity should be pursued because it could provide additional revenue generation possibilities for the Electricity Industry and accordingly for the Municipalities willingly involved.

## 3. BACKGROUND

South Africa is in the process of liberalising the telecommunications service provisioning industry by establishing a Second Fixed Landline Network Operator, generally referred to as the Second Network Operator (SNO). After many iterative actions in the past, it seems

that the 51% equity partner will be announced during August 2003 and the license from Government issued shortly afterwards.

The SNO will include ESKOM Enterprises/Transtel (30%), Black Economic Empowerment group NEXUS (19%) and a Strategic Equity Partner (51%). The real challenge is for the SNO to build a countrywide network within two years. Experience has taught that the classic SNO Model worldwide has a limited penetration between 5 – 15% and that only 6 SNO's are cash positive in the last ten years. They are mostly hampered by the obstacles of ability to get paying customers, long period to roll out national infrastructure and service delivery at local level.

SA Telkom has an annual income of some R33 000,00 million from 6 million existing customers. The mobile phone subscribers totals 16 million. The SNO is seriously challenged by being a new entrant in the historically monopolised environment to have a core network installed by end November 2003. Efficient roll out of new universal quality services to new paying customers need to be done in good time to ensure competitiveness. This has to be done within the ambits of acceptable return on investments made by overseas operator(s). The biggest challenge observed by the working group, is the absence of accessible last mile infrastructures.

#### **4. METRO TELCO OPPORTUNITY FOR LOCAL GOVERNMENTS (LG)**

The Electricity Divisions of LGs, who owns the Electricity Distribution Grid, have already an installed base of contemporary power cables, optical fibre cables and wireless linkages to support their business. These could be deployed for telecommunication purposes, especially in the last mile, by applying the latest developments in powerline communication, wireless communication standards (IEEE 802.11, IEEE 802.16) and the latest telecommunication switching technologies. In using these facilities and available infrastructure for a Metro Telco, it was concluded that penetration rates would be much higher than with the traditional SNO and at a lower cost. LG can also provide Intellectual Property rights and capital. By sharing in the total costs by means of Joint Ventures (JV) or Public Private Partnerships (PPP) with the SNO, access to additional revenue generation can be accomplished.

It was noted that LGs already have an existing customers base and accompanying business processes and systems in place to provide the back office needed for provisioning of LG services. Additional telecommunication service delivery varying from low capacity digital communication to bandwidth on demand and broadband on available infrastructure can become a reality. By refreshing the digital infrastructure telecommunication services can be delivered on the core networks based on next

generation network (NGN) technologies like Asynchronous Transfer Mode (ATM), Dense Wave Division Multiplexing (DWDM), Intelligent Networks (IN), next generation Network Management Systems (NMS) and state of the art Customer Relationship Management (CRM) systems. Applications can thus be run on Multi-service Internet Protocol mediator platforms by applying Multi Protocol Label Switching (MPLS) technologies.

It was observed that refreshing the infrastructure will not only bring about additional revenue generation possibilities, but will also benefit the electricity divisions of municipalities, and for that matter the Electricity Distribution Industry in South Africa, as a whole.

It was observed that capacity and ability can be established to provide local services to the SNO by implementing either of two business models namely, equity participation in the SNO or a Metro Telco under the SNO license. These newly established Metro Telco's will bring tremendous socio-economic development potential along. It was concluded that Metro Telco's will by harnessing the Information and Communication Technology (ICT) revolution, contribute towards the quest of bridging the digital divide and thereby improve the lives of many people. From first iteration developed business plans on the Metro Telco idea, as particularly applied to the Tshwane case, it was observed that infrastructure refreshment can be applied and paid for in a short span of time, 4 – 6 years.

## **5. BUSINESS STRUCTURES**

After many discussions and deliberations it was decided that in order to test the feasibility of a Metro Telco, either one or both of two models, described bellow, should be applied to the unique circumstances of individual municipalities. Favourable results thus obtained can be used as background knowledge during further negotiations with the SNO. They are very briefly:

### **a. Equity participation in SNO**

#### Advantages

- SNO supplies infrastructure
- No need for operator in LG
- Get income from SNO
- Less communication experience needed
- Low Capex

#### Disadvantages

- Low income potential
- SNO controls infrastructure
- Weak negotiating position
- No control over income
- SNO controls customers
- License issue

## **b. Metro Telco under SNO license**

### Advantages

- High income potential
- Control infrastructure
- Control customers
- Control income
- Low exposure to SNO
- License cover through SNO

### Disadvantages

- Must roll out own infrastructure
- Need Telco experience?
- Capital investment
- Need operator providing billing and experience

The feasibility of a Metro Telco was at first tested by applying these models to the City of Tshwane's already partly developed infrastructure. The outcomes proved that a Metro Telco is feasible in Tshwane.

In an attempt to determine the feasibility of similar Metro Telco's in other munics, Gauteng Economic Development Agency (GEDA), has made a sponsorship available to assist any other Metro in South Africa with the initial audit on related telecommunications infrastructure. After the information from the audit has become available business modelling can proceed. The outcomes will reveal the viability and then a conceptual network design will be done in order to determine the costs involved to become fully functional and profitable.

## **6. ACTION PLAN**

The workgroup decided to recommend the following steps to be taken in an attempt to make optimal use of the SNO opportunity:

- a. Create Metro Telco action (lobby) group
- b. Employ expert consultants to do the work
- c. Apply to put case of Metro Telco to the Department of Communication (DOC)
- d. Create Metro Telco business structure and final business plan
- e. Get other partners involved (Operator and Finance)
- f. Put political support plan in place
- g. Negotiate SNO participation with DOC
- h. Due diligence on partners

## **7. STEPS TAKEN BY THE WORKING GROUP**

- a. Consensus still to be reached on whether each Metro should negotiate as an entity by itself or whether a collective group from all the Metro's should enter into negotiations with the SNO.
- b. GEDA have offered a sponsorship to assist with the audit and business modelling. Separate quotes were also obtained from consultants that will be considered in due course.
- c. A letter was written to the Minister of Telecommunications on behalf of the AMEU telecommunications workgroup to explain the case of the Metro Telco. In response to this letter it was indicated that an official bid should be submitted via the laid down routes. A presentation was also made to representatives from the Department of Communication (DOC) in which the case of the Metro Telco was explained. The DOC was very impressed and suggested that the initiative should be pursued and further developed.
- d. A business structure, as explained above, and a financial modelling tool was developed and applied to Tshwane Metro. Information generated at Tshwane and the financial modelling tools were made available to all members of the working group to test, become familiar with and apply.
- e. Initial contacts were made with financiers to test the availability of funding. Seeing that the business model depends to a great extent on the licensing of the SNO, it was decided to wait a while.
- f. Workgroup members are attempting to put up meetings with the higher political structures. It is planned to make a presentation to them and try to get their buy-in.
- g. Negotiations with the SNO have not taken place except for on an ad hoc basis. From preliminary discussions it became very clear that both the short-listed bidders on the 51% stake are very keen on the Metro Telco idea. Two Consortium have included the Metro Telco as a strategic equity partner in their business-plan and CommuniTel have indicated they will pursue the initiative very soon if they were to be the successful bidder on the 51% equity stake. Documentation is available to support this.
- h. Due diligence sponsorship has been arranged with GEDA as explained above.

## **8. CASE STUDIES**

A number of case studies were cited, shared amongst the members and summarised below. It was noted that in each case, the Electricity Distribution Infrastructure was used

extensively to bring about the developments and bring about socio-economic development.

#### **a. Infocomm 21 - Singapore**

This initiative by the Singapore Government is aimed at developing Singapore into a vibrant and dynamic Information and Communication Technology capital with a thriving and prosperous e-Economy and a pervasive and Infocomm-savvy e-Society.

The Strategic Thrusts of Infocomm 21 are:

- To position Singapore as Premier Infocomm Hub
- To develop Singapore Business Online
- To develop Singapore Government Online
- To develop a Singapore society that is Infocomm-savvy
- To develop Singapore as Infocomm Talent Capital
- To enable Economic Growth and Development

#### **b. Malaysia – The Multimedia Super Corridor (MSC)**

The MSC is a technology initiative by the Malaysian government to support developers and users seeking to deliver high-value multimedia services and products to customers across an economically vibrant Asia and the world. To reach this objective it aims to bring together all the elements needed to create an environment that engenders truly mutual enrichment for all kinds of IT/multimedia companies. The elements are:

- Leading-edge soft infrastructure;
- World-class IT networks;
- Major Designated Cyber city as a high-powered, one-stop shop; and
- Top-quality urban development in a major MSC Cyber city.

#### **c. Dublin Digital Hub – Ireland**

The Irish believe the following for a Digital Hub.

“The Digital Hub will create an information infrastructure, which will be the foundation and generator of a new economic base for Irish and international digital media companies.”

- The Dublin Digital Hub will be delivered through among others, the following: High-speed broadband infrastructure available in the immediate area

- Initiation of Public Private partnerships (PPP) tender process for the delivery of a mix of digital media, enterprise, learning, retail and residential development.
- Information/Marketing centre as a general information point and digital media showcase
- Temporary accommodation for companies, on-site Enterprise Ireland support services, learning and training initiatives and short-term digital media related uses
- Commencement of refurbishment of Thomas Street properties for integrated mix of enterprise, learning and living over the shop development.
- Improvement to the environment in the core development with tree planting, signage, lighting and digital media installations.

“The Digital hub will be a meeting place for enterprise, creativity and technology and will be enabled through collaborative projects between creative enterprises, the technology sector, artists, arts organizations and education providers.”

#### **d. The Digital Network Infrastructure and Metropolitan Chicago**

The Metropolitan Planning Council's Telecommunications Working Group embarked upon the task of conducting an assessment of the then existing telecommunications infrastructure in the Chicago area. The Working Group also looked at the impacts, both economic and social, of information technology; and made firm recommendations for public and private actions.

#### **e. Borlänge – Sweden**

Borlänge used to be a municipality characterised by a few processing industries in the steel and paper sectors. These firms had undergone drastic rationalisation programs which resulted in thousands of lost jobs. Borlänge was slipping into becoming an economically depressed area. The interventions of Borlänge Municipality and the Swedish government with the support of the European Union, managed to put together action plans, executed them and saw changed fortunes for the area. The provision of the above services are depended on the core infrastructure and are a key to creating powerful social and economic networks by encouraging communication and the exchange of information.

## **9. CONCLUSION**

The AMEU Telecommunications Workgroup has pursued its task with enthusiasm and diligence. Much work remains to be done. Most of the tasks were driven with huge time constraints because the window of opportunity was very limited and many initiatives had to be taken at short notice. The team have functioned very effectively and were always available to give assistance wherever needed.

#### **10. RECOMMENDATIONS:**

- a. That a budget be made available for travelling and administrative purposes.
- b. That a further report be written on the choice of individual or collective negotiations with the SNO.
- c. That as many as possible munics participate in this initiative and that the political powers be informed and actively participate.
- d. That cognisance should be taken that this is the biggest local government revenue generation opportunity ever and should be pursued with eagerness and enthusiasm.