

Village Power 2000

Commercial Power Systems for Wireless Rural Telephony

A Southern African experience

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SA Telkom DECT roll-out

Background

- ☀️ Digital Enhanced Cordless Telecommunications.
- ☀️ Roll out of 2 million lines.
- ☀️ Part of fixed line licence.
- ☀️ Dual supply for hardware.
- ☀️ Lucent and Alcatel telecommunications equipment.
- ☀️ 30 watt module and 24 A/hr battery per system.



Telkom DECT domestic installation 30 watt module. Mafeking, South Africa.

SA Telkom DECT roll-out

Implementation

- ☀ Originally PV focussed on non-grid areas.
- ☀ Due to pre-payment electricity - extended to grid.
- ☀ Installation based on applications.
- ☀ Payphones installed as well.
- ☀ Positive response.
- ☀ Reduction in copper loss.



Telkom callbox. South Africa

SA Telecommunication DECT roll-out

Security

- ☀ Experience of theft on telecommunication systems.
- ☀ Green for security and insertion of logo.
- ☀ After 120.000 systems delivered theft experience is not significant.
- ☀ Systems mainly subscriber dedicated.



VSAT Installations

- ☀ For Small businesses and part of lottery roll out.
- ☀ Approximately 4.000 48v systems delivered.
- ☀ Problem with theft and replacement of modules.
- ☀ Various security systems on test currently.
- ☀ Theft between 10 -20% of modules. This also for other telecommunication applications.



Telkom VSAT installation for 1994 elections. Matopas, Northern Province South Africa

Rural applications in Namibia

- ☀ Approximately 5.000 systems supplied and installed for domestic and business use.
- ☀ Startup problems with installations.
- ☀ No direct involvement with PV specialist company.
- ☀ Equipment installed by Telkom Namibia.



75 watt module powering a Siemens Ultraphone. Farmhouse in Namibia.

Highway callboxes

- ☀ 48v 4 x 50 watt systems.
- ☀ Situated along the highway in Abu Dhabi for emergency use.
- ☀ Approximately 250 systems installed.



Etisalat emergency phone installation outside Abu Dhabi - in the desert.

Review of implementation

- ☀ DECT implementation currently not commercially fully viable.
- ☀ VSAT and repeater stations hindered by substantial debt.
- ☀ Due to grid unavailability and pre-payment PV is seen as easiest solution.



RurTel repeater station on game farm - Northern Province, South Africa.

