2010 World Cup Preparation
Sentech's Readiness

Date: 31 October 2006

Team Members

Chairperson: Mr. Colin Hickling

Chief Executive Officer: Dr. Sebiletso Mokone-Matabane

Chief Financial Officer: Mr. Siddique Cassim

Act. Chief Operating Officer: Mr. Frans Lindeque

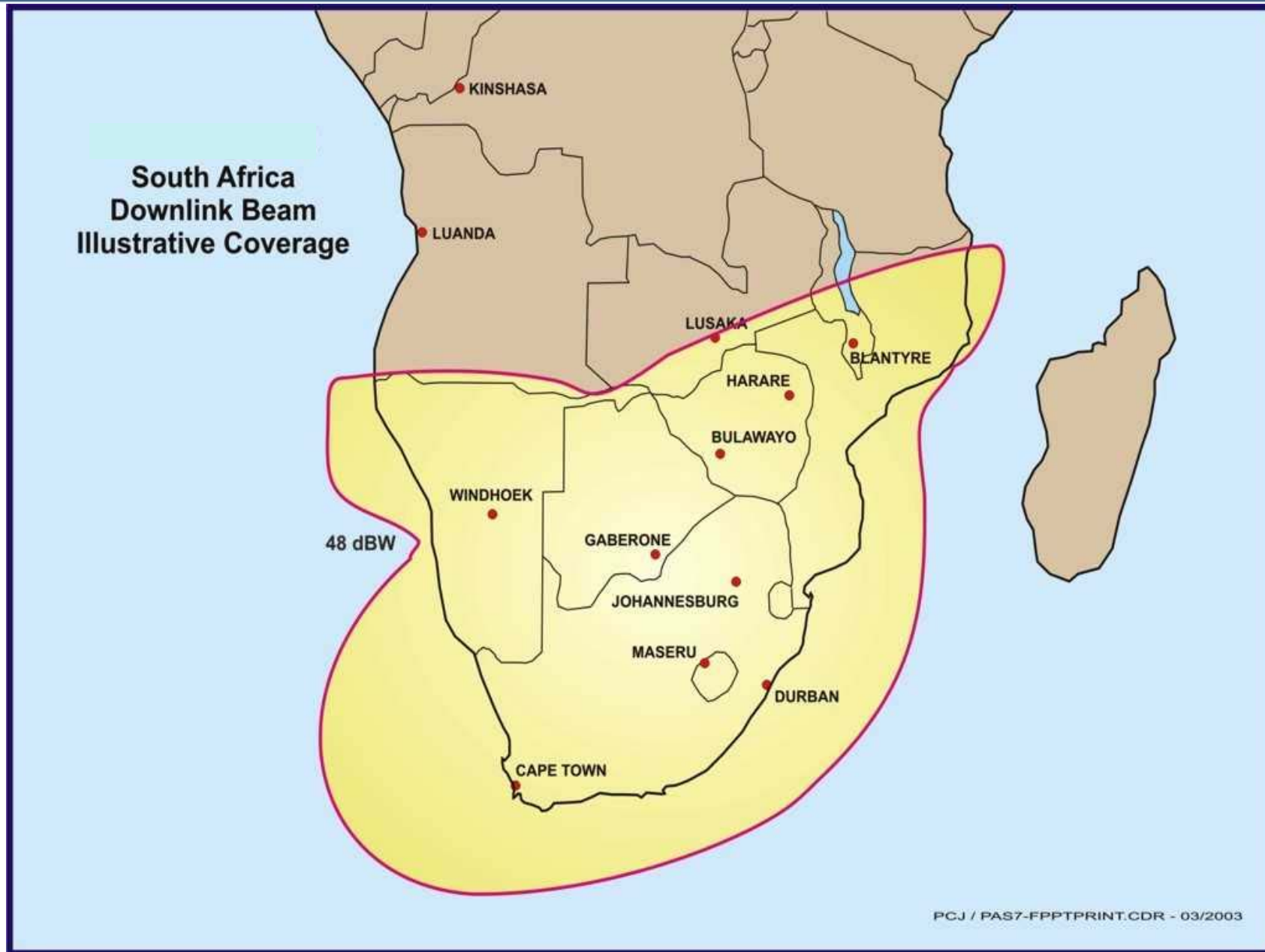Executive Reg & Gov Affairs: Mr. Dingane Dube

Introduction

In supporting the Government's guarantees for the ICT sector in terms of the Soccer World Cup 2010, SENTECH's role will mainly be based on "wireless" solutions such as satellite services, broadcast signal distribution as well as broadband wireless services

National

- Satellite back-up services (Stadiums to IBC)

- Broadband Wireless

- DTT (Digital Terrestrial TV) and DTH (Direct-to-home) roll-out

- HDTV

- Mobile TV services

- SNG Requirements

National Satellite support – PAS-7

South Africa Downlink Beam Illustrative Coverage

48 dBW

PCJ / PAS7-FPPTPRINT.CDR - 03/2003

Sentech's Teleport

International
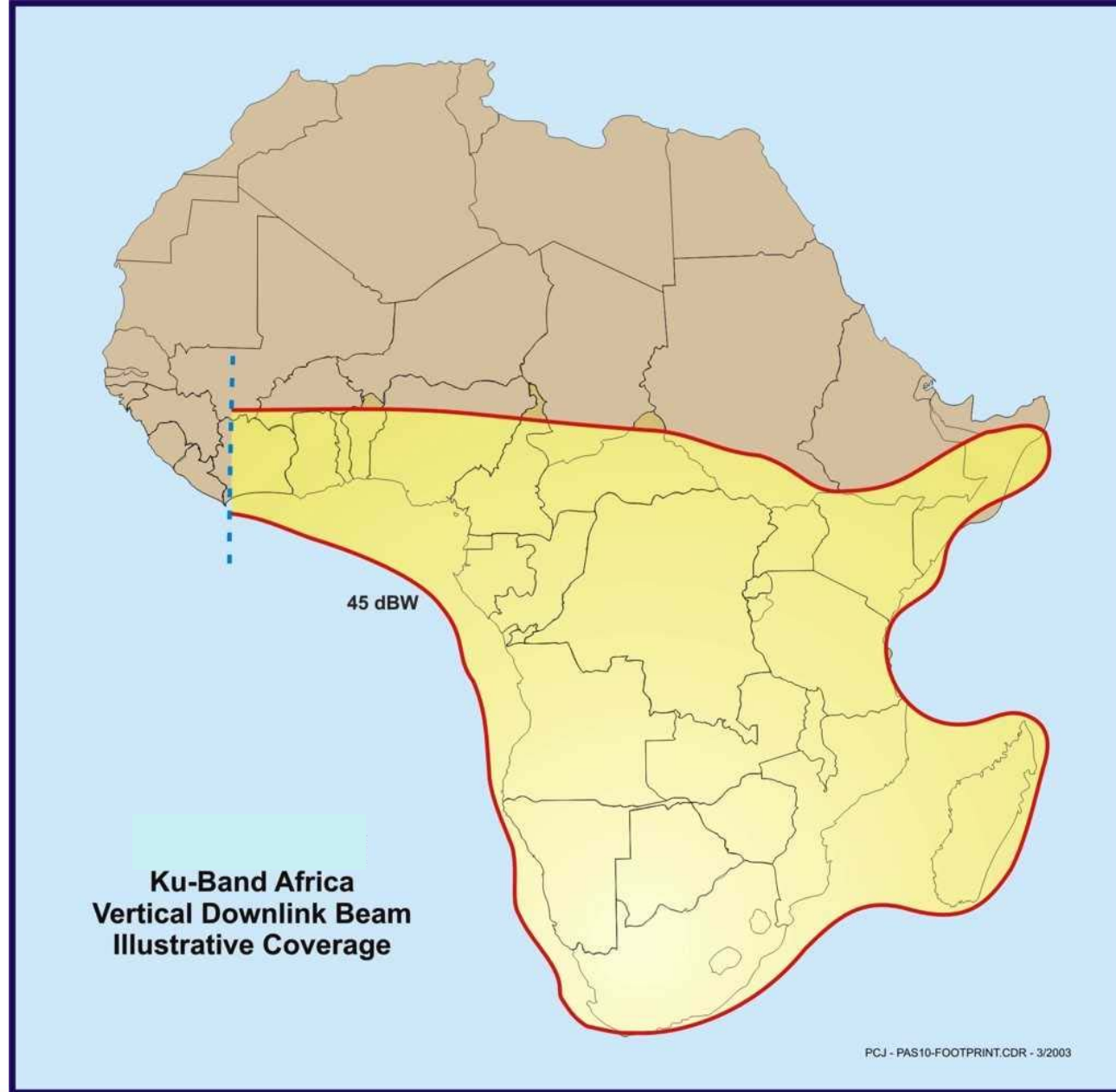
- EASSy/SAT-3 connection (STP – Mtunzini)

- Satellite Teleport (IBC to rest of Africa & other parts of the world – both SD and HDTV)

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EASSy
SEYCHELLES

SAT-3 / WASC

TdM
EUROPA ISLAND
FSS

SAFE

South Africa

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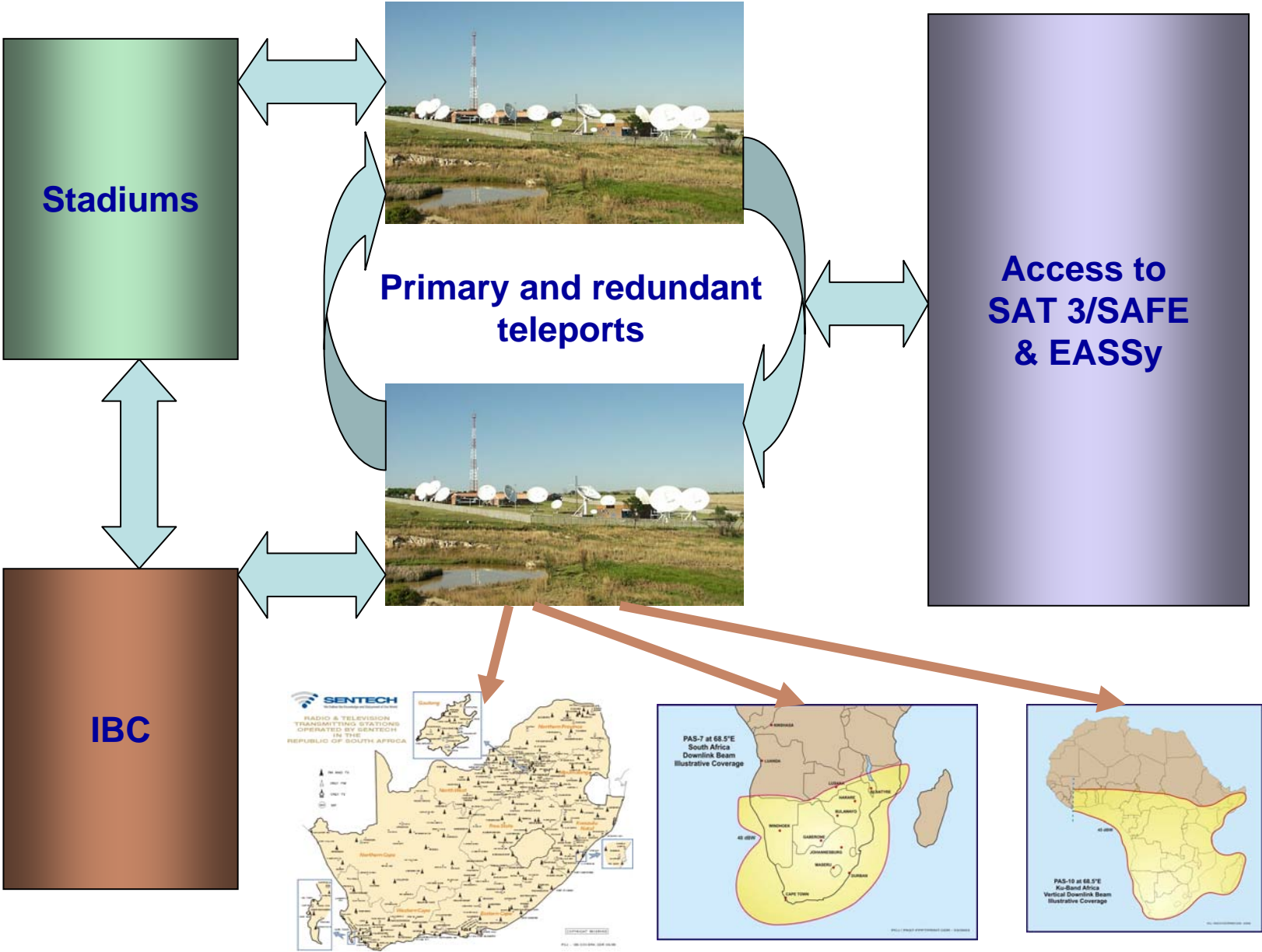© 1988-1996 Microsoft and/or its suppliers. All rights reserved.

International Satellite Capacity

- SENTECH's satellite teleport at Honeydew will be utilised to provide full back-up for the EASSY and SAT-3 undersea cables in terms of international traffic.

- It will be an efficient way of broadcasting live games into various African countries.

- Readiness:

    - Network capacity will have to upgraded to be able to transmit more traffic during the event. A second teleport is essential and has to be established to ensure full redundancy.

    - Funding is required.

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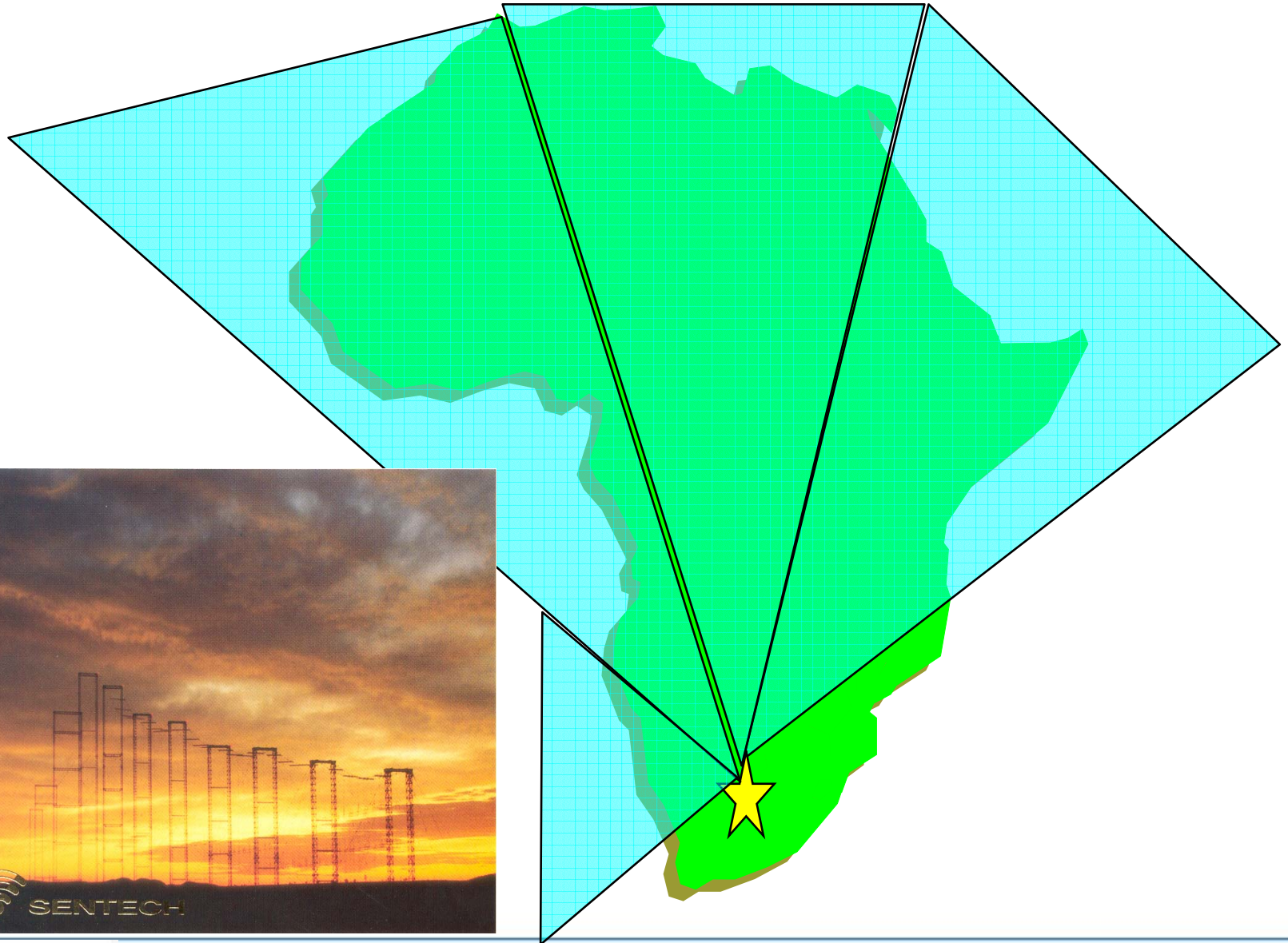
45 dBW

Ku-Band Africa
Vertical Downlink Beam
Illustrative Coverage

PCJ - PAS10-FOOTPRINT.CDR - 3/2003

Stadiums

Primary and redundant teleports

Access to SAT 3/SAFE & EASSy
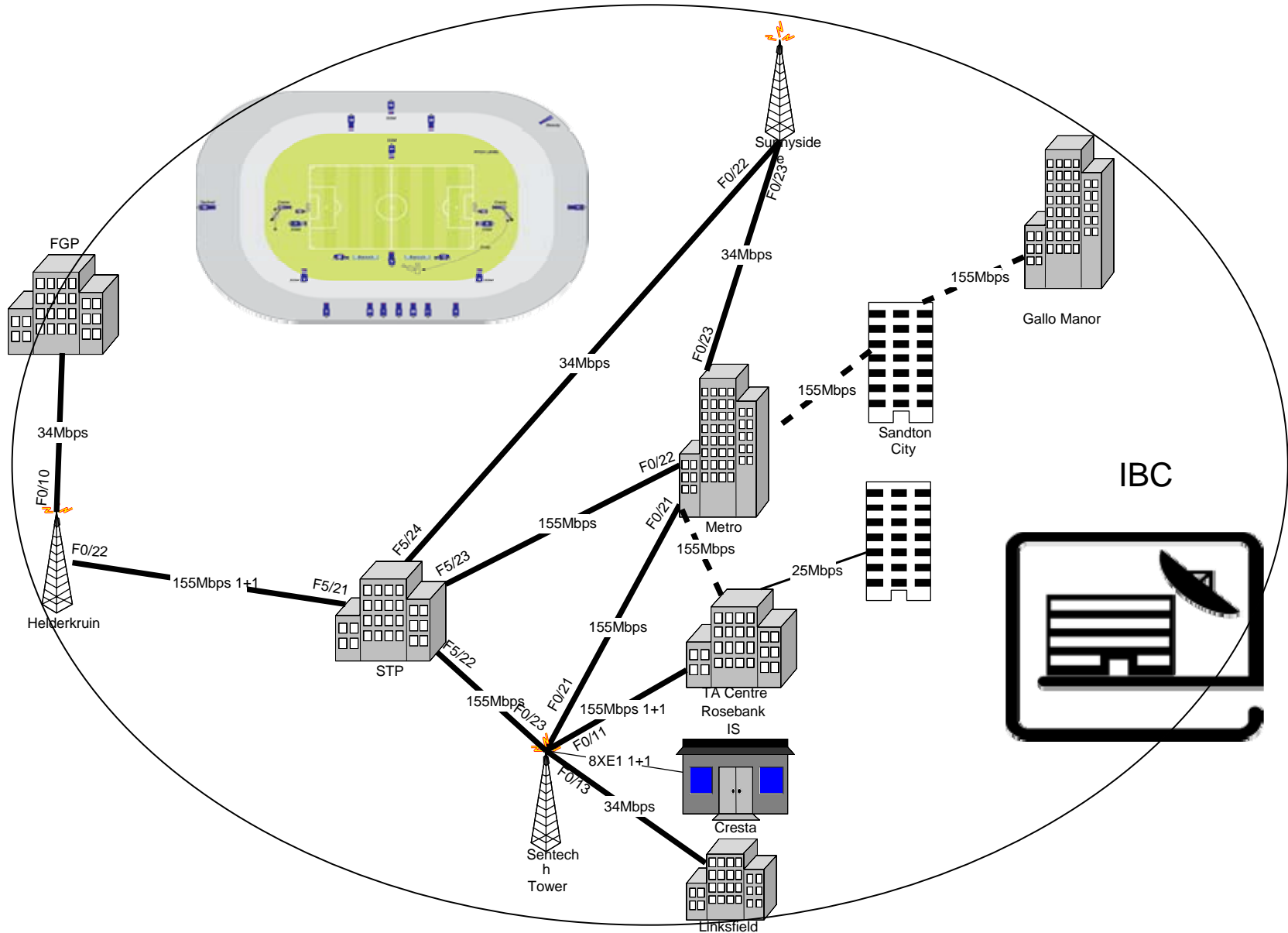
IBC

Radio Services

SENTECH's Short wave station

Broadband Wireless

Broadband Wireless – Current Set-Up
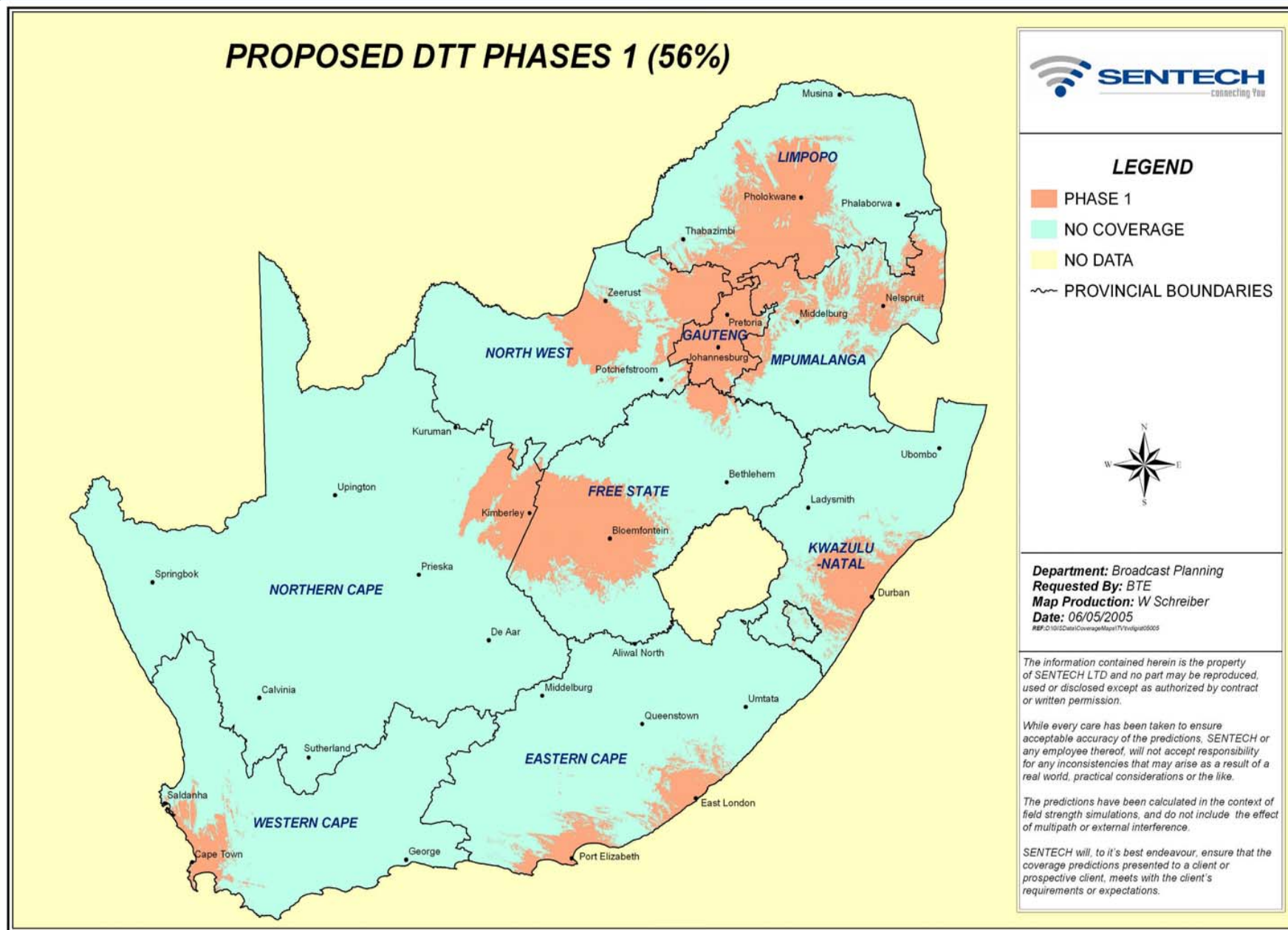

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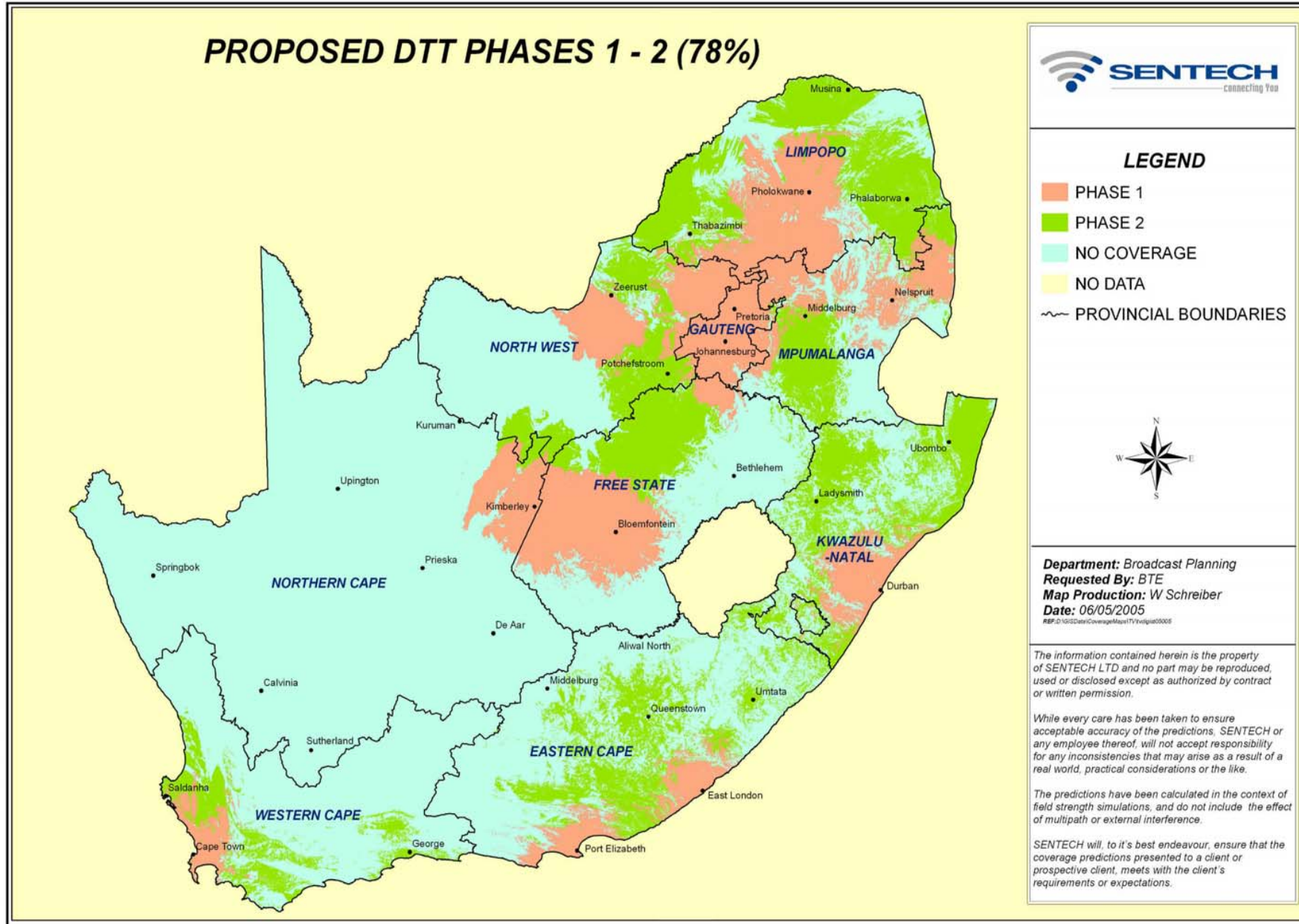
DTT (Digital Terrestrial TV)

DTT

- SENTECH has started the digital migration project where infrastructure is upgraded for DTT broadcasting.

- DTT migration should start in 2008 to cover 78% of the population by mid 2010.

- Dedicated channels will be available for live soccer games during the event.

- Readiness:

  - SENTECH will be able to cover 78% of the population by 2010

  - Preparation phase of project has started

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Year 3 of implementation

PROPOSED DTT PHASES 1 (56%)

Year 4 of implementation

PROPOSED DTT PHASES 1 - 2 (78%)
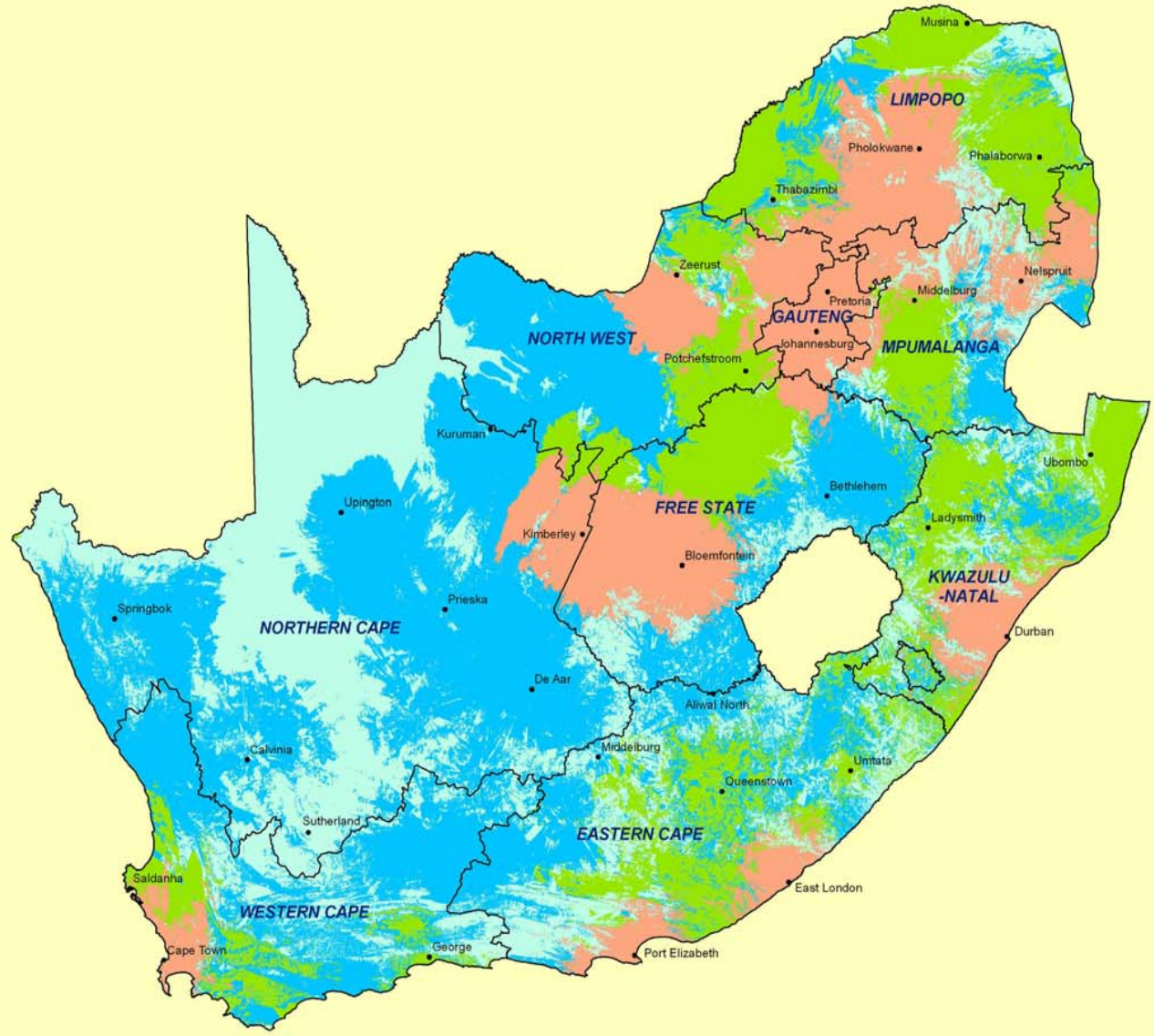
Year 5 of implementation

PROPOSED DTT PHASES 1 - 3 (92%)

LEGEND
- PHASE 1
- PHASE 2
- PHASE 3
- NO COVERAGE
- NO DATA
- PROVINCIAL BOUNDARIES

HDTV and Mobile TV

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HDTV Readiness

- FIFA requires that HDTV feeds are made available to the IBC

- SENTECH and the SABC did the first live broadcast in HDTV during July 2006. Both the SABC and SENTECH have adequate skills to implement HDTV well in advance of 2010.

- Readiness:

    - The HDTV links will mainly be carried on the fibre backbone. In view of migration, the DTT network will not be able to transmit HDTV services terrestrially but it will be possible to broadcast HDTV services via satellite.

    - Testing to start early 2007.

Mobile TV

- SENTECH, Multichoice and various industry players have embarked on a project to launch DVB-H (mobile TV) on a test basis in various metropolitan areas.

- Readiness

  - Tests during the WCS 2006 was very succesful and we have adequate skills and resources to deploy a national mobile TV network by 2010. Commercial and regulatory issues to be resolved soon in view of establishing a policy framework for DVB-H broadcasting.

Spectrum Requirements

DTT migration	UHF
DVB-H	UHF
BBW expansion	2.5/3.5 GHz
Microwave links	7/10/13/26 GHz
EASSy	DWDM
Satellite back-bone	Ku/C-Band
DTH National/Africa	Ku-Band
HDTV	Ku-Band
Fibre connectivity	DWDM
Teleport services	Ku/C-Band
National Security network	TBC

Supporting Africa

- Satellite based DTH services on both PAS-7 as well as PAS-10.Covering all SADC and sub-Saharan countries

- International voice traffic.

- Short wave broadcast – radio commentary.

- Signal distribution services to various broadcasters in Africa, to be used for re-distribution.

- EASSy cable access

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Other Services

SNG Requirements

- SENTECH has formed an alliance with an internationally established company for the provisioning of backhaul and SNG (Satellite News Gathering) services.

- Readiness:

  - SENTECH to ensure that SNG links will be able to link HDTV services from the different venues.

  - Funding required.

Security Provisioning

- SENTECH has been involved with various public safety initiatives including extensive research on TETRA based networks .

- Discussion were held with various key entities to explore security options to meet requirements for the WCS2010.

- Readiness:

  - Limited and small TETRA networks have been rolled out. SENTECH will be in a position to establish a national TETRA network, subject to national security policy and provided funds are made available for such a network.

  - If work is started in 2007, a national network will be ready for the WCS 2010.

  - Funding required.

Summary

Sentech's obligations will be based on:

- Satellite based service provisioning:

  - DTH including HDTV – Including rest of Africa

  - Back-up links (National & International)

  - SNG

- Access to undersea cable – EASSy

- DTT and terrestrial broadcasting.

- Broadband wireless services – data, voice and Internet

- National Security network

Thank You

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Digital Transmitters by end 2008/9

Phase 1 (56% coverage)		
Bez Valley	Linmeyer	Tshwane
Bloemfontein	Menlo Park	Pretoria North
Cape Town	Mokopane	Rustenburg
Despatch	Mondeor	Stellenbosch
East London	Mulbarton	Sunnyside
Ethekwini	Nelspruit	Table Mountain
Fishoek	Overport	The Bluff
Heidelberg	Paarl	Tygerberg
Helderkruin	Pietermaritzburg	Verulum
Johannesburg	Port Elizabeth	Zeerust
Kimberley	Port Elizabeth City	

Red denotes 2010 host city coverage

Digital Transmitter sites added in 2009/10

Phase 2 (78% coverage)			
Alexander Bay	Glencoe	Matatiele	Sea Point
Amanda Glen	Grabouw	Middelburg	Sibasa
Andrieskraal	Grahamstown	Mooi River	Simonstown
Aurora	Greytown	Mount Ayliff	Somerset East
Bedford	Greytowndorp	Newcastle	Standerton
Butterworth	Groot Brakrivier	Ngangelizwe	Suidrand (Kroonstad)
Christiana	Hankey	Nongoma	Suurberg
Clifton	Hermanus	Nylstroom	Thabazimbi
Cradock	Hoedspruit	Oudtshoorn	Theunissen
Davel	Hout Bay	Patensie	Tzaneen
Donnybrook	Howick	Paul Sauer Dam	Ubombo
Empangeni	King Williams Town	Piketberg	Umtata
Enzelsberg	Klerksdorp	Plettenberg Bay	Villiersdorp
Eshowe	Knysna	Pongola	Volksrust
Estcourt	Kroonstad	Port Shepstone	Vryheid
Franschhoek	Ladysmith	Port St Johns	Welverdiend
George	Louis Trichardt	Queenstown	

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Digital Transmitter Sites added in 2010/11

Phase 3 : 92% coverage				
Aliwal North	Elands Height	Kokstad	Nqutu	Swartruggens
Barkley East	Elliot	Kuruman	Petrus Steyn	Taung
Beaufort West	Empangeni	Kuruman Hills	Piet Plessis	Thaba Nchu
Bethlehem	Engcobo	Ladismith (Cape)	Piet Retief	Tolwe
Blouberg	Entshatshongo	Ladybrand	Pofadder	Touwsrivier
Boesmansko	Ficksburg	Louwsburg	Pomfret	Tshamavudzi
Burgersdorp	Gaba Town	Lydenburg	Prieska	Ugie
Cala	Ganyesa	Madibogo	Qudeni	Ulundi
Calvinia	Garies	Malamba	Riversdale	Uniondale
Carnarvon	Graaff-Reinet	Matjiesfontein	Sabie	Uniondale Town
Carolina	Groot Marico	Mbuzini	Schweizer Reneke	Upington
Ceres	Harrismith	Mmabatho	Senekal	Van Rhynsdorp
Colesberg	Hectorspruit	Montagu	Springbok	Victoria West
De Aar	Hexrivier	Motswedi	Springfontein	Williston
Dewetsdorp	Kareedouw	Napier	Sterkspruit	Willowmore
Douglas	Kirkwood	Ngangelizwe	Straalhoek	Witsieshoek
Dullstroom	Kleinmond	Noupoort	Supingstad	

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