

# **REPORT ON HLT ACTIVITIES IN SUB-SAHARAN AFRICA**

2009-2010

**COCOSDA / WRITE WORKSHOP  
LREC 2010  
MALTA**

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# **OVERVIEW**

## **Activities in**

- South Africa
- West Africa
- East Africa

## **Websites as references**

# South African HLT landscape

- 11 official languages
- HLT community
  - R&D community (universities & science councils)
  - Very few private sector companies
- Various government initiatives
  - DST: HLT road-mapping process, NHN
  - DAC: HLT strategy, National Centre for HLT
  - NRF: research funding



# Challenge

- SA has not yet capitalised on opportunities to create a thriving HLT industry
  - Lack of awareness within the local HLT community
- Perpetuated by perceived fragmentation of South African R&D activities
  - Lack of a unified technological profile of HLT activities across the 11 languages
- 2009: a technology audit for the South African HLT landscape (SAHLTA)
  - Align R&D activities and stimulate cooperation
  - Similar to Dutch (BLaRK), EuroMap

# An HLT profile of the official South African languages

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## Response rate

<b>Participant</b>	<b>Contacted</b>	<b>Response received</b>
<b>Primary</b>		
Universities	7	6
National science councils & independent research centres	2	2
Private companies	6	4
<b>Total</b>	<b>15</b>	<b>12</b>
<b>Secondary</b>		
National lexicography units	11	3
Government departments	1	1
<b>Total</b>	<b>12</b>	<b>4</b>



# Academic capacity building

- Programmes at number of universities: mainly post-graduate – from different positions (linguistic – technological)
  - Only one undergraduate programme in HLT (North-West University)
- Series of workshops:
  - 3 workshops on Finite State methods (2009) – University Pretoria & UNISA
  - Training workshop on Wordnet (2009) – UNISA
  - HLT Roadmapping workshop (2009) – Meraka
  - National HLT Network (NHN) Seminar – Overview of activities (2009) CSIR / Meraka
- International workshop with members of the Dutch Language Union (Nederlandse Taalunie) on potential co-operation in HLT – Cape Town (2008)



# South African Government

- **Human Language Technology Unit**

Department of Arts and Culture (DAC)

National Language Service: <http://www.dac.gov.za>

- Given continued pressure primarily from the academic sector over the last decade – National parliament approved the establishment of a National HLT Resource Centre in 2009.
- A new HLT Expert Panel (of active role players) (HLTEP) was established for a period of five years to assist DAC in promoting the development of resources and advise on policy matters
- The HLTEP has already commissioned two large acquisition projects (text & speech) for the next three years and is now in the process to develop a blueprint for the establishment of a **management and distribution agency** – [hub for resources from Africa??]

# West Africa

## Dr Tunde Adegbola (Nigeria):

- An International Workshop on Speech Technology for Tone Languages - March 2010 - Abuja Nigeria.
- Organised by the University of Uyo - collaboration of the National Universities Commission - funded by the World Bank -Step B Scheme.
- It was attended by students and faculty from departments of Linguistics, Computer Science and Physics from a couple of Nigerian universities and two researchers affiliated to Alt-i.
- Experts from Nigeria, Germany, UK and South Africa. This workshop is a watershed of sorts in the development of HLT in Nigeria as it is the first time that scholars of Linguistics and Technology will come together to formally contemplate the issues of Human Language Technology for Nigerian languages.

## West Africa (2)

- **The Nigeria HLT Society** was formed during the workshop. It has as President Prof. Eno Urua of the University of Uyo. The Society aims to be the coordinating body for the development of resources for Human Language Technology for Nigerian languages.
- There is steadily increasing interest in HLT among Nigerian students and scholars:
- A faculty member - Systems Engineering -University of Lagos - working towards a Ph.D - Speech Recognition of Yoruba.
- A number of undergraduate and post-graduate work are now being done in the area of HLT in the University of Ibadan.

# **East Africa**

## **Djibouti Centre of Speech Research**

Dr Nimaan Abdillahi

- Convened a conference on HLT – January 2010
- African HLT Association (details not known)

## **Kenya : Teknobyte Speech Technologies**

Dr Mucemi Gakuru

- Speech synthesis in Kiswahili

# Websites

## **AfLaT – African Language Technology**

<http://www.aflat.org/>

- Aims to catalogue language resources for the benefit of researchers interested in African language technology
- AfLaT.org contains a steadily growing collection of bibliographic resources, web links and tools, provided by AfLaT members.
- Second workshop on HLT applications in African languages (MALTA)

## **National HLT Network (South Africa)**

<http://www.meraka.org/nhn>

- Facilitates local and international collaboration
- Administered by Meraka

## **Conclusion**

- Exceptional growth in Southern Africa over the last two years
- Steady growth in West and East Africa
- Need for co-operation within the African continent and wider

Thank you!







