# Egyptological language resources and interlinear representation

Mark-Jan Nederhof

2006-08-08

# Introduction

System in operation since 2000:

http://www.let.rug.nl/~markjan/egyptian/texts/

- AELalign presented at I&E 2002 (Pisa).
- More resources created since then.
- New implementation; demo.
- New developments in hieroglyphic encoding.

# Main goals

Motivations:

- Share results of studying texts with others.
- Consolidate knowledge contained in printed media and the internet.
- Other applications, e.g. museum visitors.

Realized by creating corpus of resources:

- hieroglyphic,
- transliteration,
- translation,
- lexical annotation.

# Related work

- BAMBI (Univ. Pisa; I&E 1998)
- METEOR (Univ. Chicago)
- Thesaurus Linguae Aegyptiae (Berlin, ...)
- ROSETTE (Euverte; this I&E)

# Principles

- Ease of creating resources.
  - XML or 'almost plain' ASCII.
  - Creation of new resources.
  - Digitization of existing resources.
- Flexibility of combining resources.
  - Distributed efforts.
  - Open-source.
- Flexibility of rending.
  - Inclusion or exclusion of resources.
  - Intelligent alignment.

# AELalign

```
<phrase>
<texthi>
<coord pos="1.1"/> z:A1*Z1-p-Z7-wn:n-i-
n:p*Z7-E15-x:a-Z7-Y1:n-A1-r:n-.:f
</texthi>
<textal>
<coord pos="1.1"/> s pw wn(.w) xw.n-jnpw rn=f
</textal>
<texttr>
<coord pos="1.1"/> There was a man called
Khunanup.
</texttr>
</phrase>
```

# AELalight

```
<1.1> z:A1*Z1-p-Z7-wn:n-i-n:p*Z7-E15-
x:a-Z7-Y1:n-A1-r:n-.:f
,
<1.1> s pw wn(.w) xw.n-jnpw rn=f
;
<1.1> There was a man called Khunanup.
```

# Alignment

```
version = B1

<42> mk wj r nHm aA=k sxtj
;
<42> 'Look, I shall take away your donkey,

<R=9.6> Hr <43> wnm=f Sma=j
;
<R=9.6> because <43> it ate my barley.
```

# Alignment (con'd)

```
version = R

<B1=42> mk Hm aA=k
;
<B1=42> 'But look, your donkey

<9.6> Hr wnm jt=j
;
<9.6> is eating my barley!
```

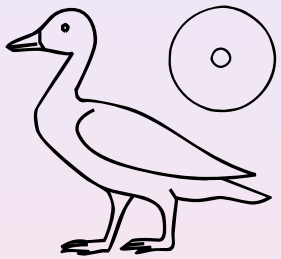
# Hieroglyphic encoding

**Revised Encoding Scheme** (RES) instead of Manuel de Codage. (See further I&E 2002.)

- More powerful.
- More streamlined syntax and meaning.
- Well-documented and standardized.
- Easier to embed into other formats.

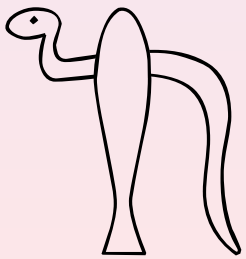
# Possibilities of RES

**Fitting**: scaling down or moving so that one sign is at a minimum distance to another (font independent).



```
insert[te](zA,ra)
```

**Stacking**: placing one sign on top of another.



```
stack[under](Hm,D)
```

# REScode

RES is powerful but rendering is time consuming.

Solution: auxiliary format **REScode** is 'compiled' RES.

Is only meaningful if font is fixed.

REScode preserves other benefits of RES: line breaks, avoiding pixelization, etc.

# To be done

- Graphical editor for hieroglyphic.
- Automatic alignment of hieroglyphic with transliteration.
- Scaling up the corpus.
- Determine how to ensure quality of contributions.