

SAFETY BEFORE SANCTIONS, SANCTIONS BEFORE BARRIERS: DIGITAL ACCESS PROTOCOL FOR ANINDILYAKWA PEOPLE OF GROOTE EYLANDT



David Nathan
Groote Eylandt Language Centre
www.anindilyakwa.org.au

W26 - Collaboration & Computing for
Under-Resourced Languages:
Sustaining knowledge diversity in the
digital age



This talk

- the context
- the Ajamurnda project: goals, challenges and priorities
- protocol
- source models
- Ajamurnda protocol model - safety, sanctions & circulation
- other usability strategies
- concluding remarks



Richly named
and regularly visited

Ngaburengkalyilyadamurru manja

Nemindumindwiya

Arrakumajenamurru manja

Anindilyakwa language

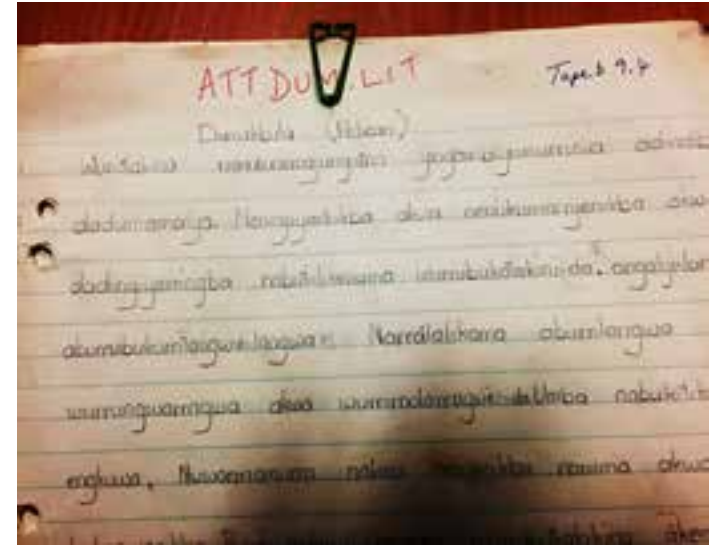
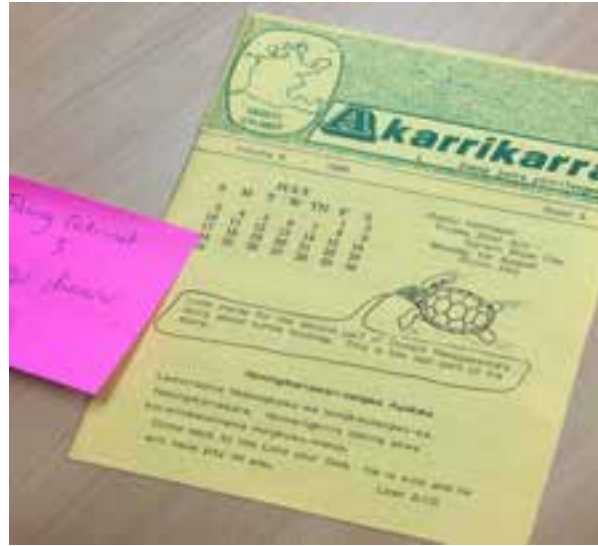
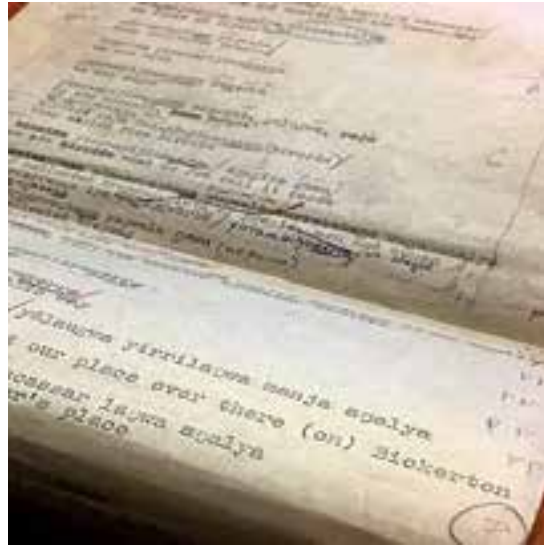
- 1500 speakers, the Indigenous language of the Groote Eylandt archipelago
- linguistically and culturally unique; language 'isolate' or Kunwinykuan; (opaque) commonalities with Wubuy/Nunggubuyu
- very complex polysynthetic morphology
- one of the strongest spoken Indigenous languages in Australia
- spoken fully by all generations; children are mother tongue monolinguals
- language not spoken elsewhere; nearly all the speakers are here
- strong cultural continuity



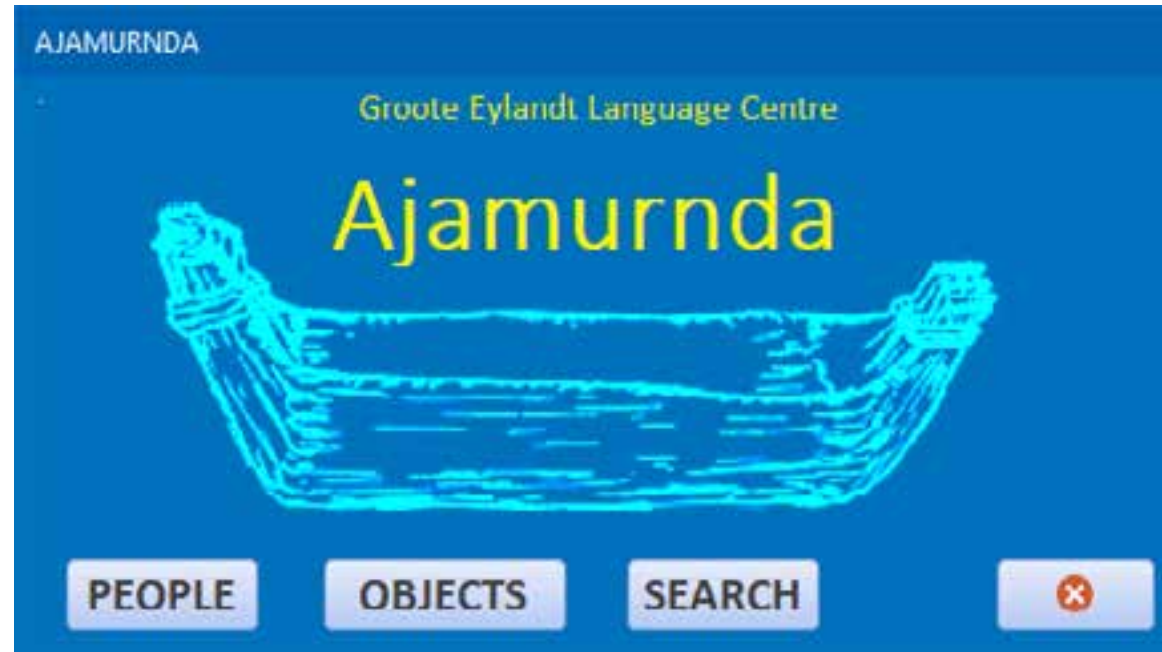
Strong language and cultural continuity

- there are no boundaries between language and other resources
- creating links between related resources strengthens their value and potential usage
- protocol matters are highlighted for a 'web' of interconnected resources





Ajamurnda project



Ajamurnda - a basket made of paperbark
used for collecting and carrying things



Why are we building Ajamurnda?

- to organise resources so we know where they are and how to access them
- to keep documents, photos, recordings - keys to the language, culture, history, knowledge and identity - safe for the long term
- to enable and encourage Anindilyakwa people to have access to these resources, and to add to them, on their own terms and in culturally appropriate ways



Goals for Ajamurnda

classical, best-practice
library/archiving



crowdsourcing



community curation

see www.e-publishing.org/publicationpage/12



individual/community
values, practices & dynamics



Priorities

- for and about the Anindilyakwa community
- protocol
- usability
- participation



Protocol

- understanding and dealing with individual/community values, practices and dynamics in regard to knowledge and information:
 - ownership / management
 - privacy
 - sensitivities
 - circulation



Challenges

- authentic & useful to community
- scope of “system” vs people
- challenge assumptions of familiar systems

*these all need
research and
consultation*



Models

- Mukurtu
 - project initiated by Kim Christen from Washington State University
 - catalogue for cultural resources from various Australian and USA Indigenous groups
 - built on top of open-source Drupal CMS
- Endangered Languages Archive (ELAR)
 - archive project initiated by the author and his team at SOAS University of London
 - built on top of open-source Drupal CMS



Mukurthu - TK (Traditional Knowledge) labels

- “Labels are a tool for Indigenous communities to add ... local protocols for access and use to recorded cultural heritage that is digitally circulating **outside** community contexts
- ... educative, non-legal ... addressing ... Indigenous cultural heritage material that circulates without Indigenous perspectives or protocols regarding fair and equitable circulation and use”
- each label consists of a graphic, and customisable text
- (Mukurthu also uses defined “Communities” - enumerated sets of individuals with permissions to access items)



Mukurtu - TK Labels - examples



TK Outreach (TK O)



TK Verified (TK V)



TK Attribution (TK A)



TK Community Use Only
(TK CO)



TK Secret / Sacred (TK SS)



TK Women General (TK
WG)



TK Women Restricted (TK
WR)



TK Men General (TK MG)

Mukurtu - TK Labels - examples



TK Men Restricted (TK MR)



TK Non-Commercial (TK NC)



TK Commercial (TK C)



TK Community Voice (TK CV)



TK Culturally Sensitive (TK CS)

Example label text: TK Women General (TK WG)

“This label should be used when you want to let external users know that the material circulating should only be shared between women in the community ... there are restrictions of access and use to women within the community based on customary law ...

This label is designed to recognize that some knowledge is gendered, and that certain knowledge can only be shared among specific members of the community. It should be used to complement already existing customs and protocols of access and use.”



ELAR (Endangered Languages Archive)

- offers access categories O, U, S, which a depositor can apply to each resource
- “O” items are available for anyone to access
- “U” items are available to registered archive users, i.e. the archive arranges users’ access rights on behalf of depositors
- “S” items are closed by default. Users see metadata only - but users can apply (via the archive catalogue messaging) to the depositor for access, via two-way negotiations
- the catalogue provides depositors with an access report panel



Anindilyakwa community is the main user group

- collapse distinctions between knowledge providers and users
- breakthrough concepts, from ethnographic observation:
 - access to knowledge:
 - is *complex* - embedded in a web of social relations
 - has *consequences*
 - is itself an important *form of knowledge*
 - recognise knowledge *circulation* and representations of it

*"I heard about that
but you need to ask
Jabani..."*



Key example 1 - gender-exclusive cupboards

- men's and women's items in separate, side-by-side, accessible cupboards in public space
- people know which cupboard is which and only access the appropriate cupboard
- there would be repercussions - consequences - if someone accessed the wrong thing, whether in real life, or on-screen



Key example 2 - poison cousins

- more widely known as *avoidance relationships*. From the Anindilyakwa School Dictionary:
nadijarrka, nadija "*poison cousin*" (mother's mother's brother's son and other relationships); son-in-law (woman speaking, daughter's husband)
dadijarrka, dadija "*poison cousin*" (mother's mother's brother's daughter and other relationships); mother-in-law (man speaking)
- specific behaviours are required; no direct communication, no facing or proximity etc.
- people preferring 'safe' social situations will e.g. avoid going into a shop if their poison cousin(s) might be in there.



Key example 2 - poison cousins [2]

- however, the dyads are not fixed as they might seem; they depend on the ebb and flow of relationships and the specifics of situations
- on screen, even for shy, 'safety-oriented' people, protocol for encountering a poison cousin is different:
 - “we wouldn't say their name”
 - “we would point out to someone else (viewing) that the person is a poison cousin”
- ∴ it's *face to face* that counts more, although different people can have different comfort levels



Beyond (simplistic) protocol

- access to knowledge has *consequences*
- possible safety threats can not all be stably or categorically identified (or relevant metadata might not be present)
- these lead to:
 - safety first (warnings, “Safe mode”)
 - sanctions before barriers (“Responsible mode”)
- we combined these with the recognition that “normal” access control via accounts and yes/no access is not a good fit (at best) and plainly simplistic



Knowledge *circulation*

- knowledge about the eligible recipients, actual recipients, and non-recipients of certain things is an important part of the Anindilyakwa cultural dynamic
- Ajamurnda will keep track of this kind of knowledge, i.e. recording patterns of access to items in Ajamurnda:
 - as part of making consequences explicit (holding users to account)
 - as part of representing, understanding and preserving this ‘ephemeral’, dynamic knowledge
 - the catalogue and collection become a *living map of knowledge circulation*



Our provisional access protocol category grid



Category	Subcat	Title	Subcat type	Description
A		Children		Recommended for children
B		Warning		General unrestricted
C	C1	Attributes	all	Items tagged with attributes**
	C2	Attributes	matched	User profile matches tagged attributes*
D	D1	Jungkayi	advised	Items tagged with advice
	D2	Jungkayi	licensed	User has explicit permission
E		Decree		Closed by decree

A: Children

- Items marked 'A' are available in Safe mode, for child users, and are presented with higher priority for child users



B: Warning

- The 'default' category. Dispreferred items may be encountered by a (prior-warned) user but there are no systematic or inherent restrictions or sensitivities



C: Attributes

- items associated with attributes, such as a story about a place, or a women's song; attributes:
Gender | Moiety | Family | Clan | Totem(s) | Land | Age group
- in *Safe mode* , a given user only gets offered an item if all of their own attributes match all the item's attributes (C1)
- in *Responsible mode*, a user is offered access to all these items (C2)
- *note*: items whose attributes are *required* or *advised* to be matched to a user are handled under D - Jungkayi.



D: Jungkayi

- *Jungkayi are the advisors, managers, or lawyers in Anindilyakwa society*
- items with expressed restrictions or sensitivities that can be stated by a 'Jungkayi' who has the authority to do so
- it could be advisory (D1) e.g. where anyone could listen to a song but should consult a particular person/family/group before singing it (system advises but applies no access restriction)
- an individual could require explicit permission from a 'Jungkayi' to access the item. Handled by a request-(negotiation)-response process. If the Jungkayi approves, the system offers the individual access (perhaps with additional advice or conditions stipulated by the 'Jungkayi').



E: Decree

- items which Reference Committee, elders, or donors decide should not be accessed at all, or only by people with 'elevated access'



Catalogue usability strategies

- navigation and search in Anindilyakwa
- ‘cultural captcha’
- audio
- images
- location-based access
- pre-enrolment

I am ... ☐ Male ☐ Female

[surname]
Amagula
Bara
Lalara
Mamarika
Pascoe
Wurramara
other



Metadata

- rich, documented metadata scheme (adapted from IRCA)

Source_history

acquired

- Describe from who the item was acquired, how item was acquired or how it arrived, and whether by donation, created by staff etc.

Open

Default value: N/A

Mandatory: yes

acquired_date

Date item was acquired; approximate or estimated if necessary e.g. 1973 (estimated)

Open; date or partial date format dd-mm-yyyy

Default value: N/A

Mandatory: no

Default value: N/A

Mandatory: no

rights_contact

Person or organisation name and contact info for communications about rights

Open **Moved to Role**

Default value: N/A

Mandatory: no

ICIP_group

Indigenous Cultural and Intellectual Property stakeholder(s) group(s) e.g. clan, gender, outstation etc.

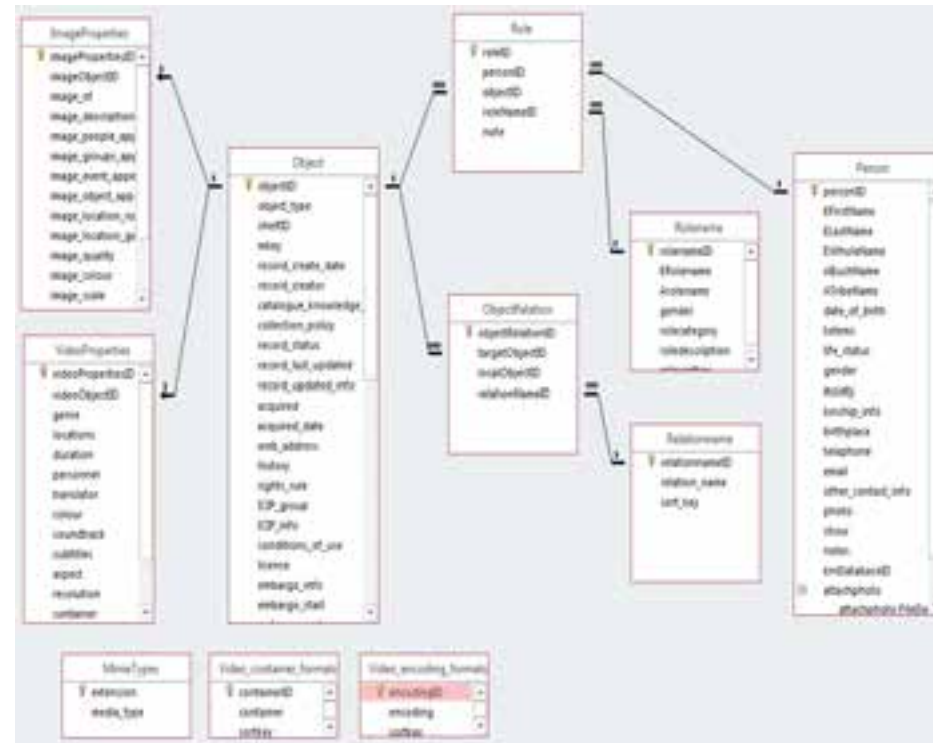
Open

Default value: N/A

Mandatory: no

ICIP_info

Indigenous Cultural and Intellectual



Roles respecting cultural categories, and expressed in Anindilyakwa

This record

Object

People & roles

People depicted

Culture & ICIP

Rights

Access

Image

Roles

People

Add a person.
First select a role

Creator (of object)

Photographer (female)

Relative

front_of

Speaker (male) - Nanikiyengba

Speaker (female) - Dadikiyengba

Speakers (group) - Warnukiyengba

Storyteller (male) - Nakumakumaka

Storyteller (female) - Dakumakumaka

Storytellers (group) - Warnumakumaka

Singer (male) - Nakumebumeba

Singer (female) - Dakumebumeba

Singers (group) - Warnukumebumeba

Artist/Author (male) - Nanikerrikarra

Artist/Author (female) - Dadikerrikarra

Artists/Authors (group) - Warnukerrikarra

Craftsman - Nangingekburaka

Craftswoman - Dadingekburaka

Craftspersons (group) - Warnungekburaka

Photographer (male) - Nanikirrbirringka

Add role & person

Waddy, b

Waddy, b

target object

Link to this

macracanthus

Object 1 of 1

Save

+ Object

Image

Document

Video

Search

Filter

+ Person

Refresh

Close

Search using Anindilyakwa terms via embedded dictionary

Embedded dictionary

anindilyakwa	english
yukurrkwa	frogmouth
yukwurna	baler shell
yukwurririja	whistling kite
yukwurririndangwa	sawfish
yulkwa	toadfish
yungwula, derriba	trepang
yuwalkurra	cyrene shell
yuwama	fly
yuwara	snake vine
yuwarjerra	skink
yuweba	meat ant (red)
yuwekuwa	mudskipper
yuwunburna	breem

Search

Search / Ngarrabirangkinama

Search people

Search objects

M174.jpg - Sawfish

Rebuild index

AIAMURRDA

ID 49 Copy Miromaa key M00049

Image Sawfish Dance

Filename M174.jpg

File path K:\library\0001\

Shelf ID DF

VIEW

Showing JFIF. Click button to view image object.

This record | Object | People & roles | People depicted | Culture & ICIP | Rights | Access | Image

Describe the image

Image of... Men dancing

Description Men doing the Sawfish Dance

Location

... coordinates

Image quality

Colour Yes

Scale

People shown Fred Bara, Bob Nundhimbala, Nadj
Mirramara Gula Talara, Arimiral Talara

Groups shown

Events shown

Objects shown

Image processing

Camera or device

Resolution

Image usages

Object 1 of 1

Object1

+ Person

Final observations

- bring computing to language and community ✗
- bring language and community to computing ✓
- “we” provide “ourselves” with all kinds of digital services
- simple channels like phones are reasonably accessible and useful to everyone
- however, for things like digital libraries and other cultural asset management, we often fall back to tired, ineffective and ***under-researched*** methods



Contradictions and puzzles - IT and languages

- apps hailed as saving languages but many are so little used that the developer pays people to use them!
meme for hooking journalists: “ancient language, modern technology”
- large sums spent developing multimedia that was technically defunct after short time!
- digital products are great candidates for empirical reporting and iterative design but these are rarely done!



Contradictions and puzzles - IT and languages

- aspirations for universal machine translatability - incompatible with growing literature on the interdependence of language and culture
- addressing *under-resourced* might be relevant to larger languages, but Indigenous languages need infrastructure, bandwidth, skills, and research into methodologies, not language processing
- ‘fundamentalism’ about “open source”, e.g. *Spoken Karaim* (authored using proprietary software) now nearly defunct but was developed 20 years ago and has served a generation of a small community, was placed in nearly every Karaim family across Eastern Europe, and contributed to their language & culture



End

- Who knows something

And who knows who knows something

Are just as important as the something that is known

www.anindilyakwa.org.au

