

Cultural Memory & Digital Mediation:
Three contrasting projects in Armenia, Australia
and South Africa

Digital Dialogues

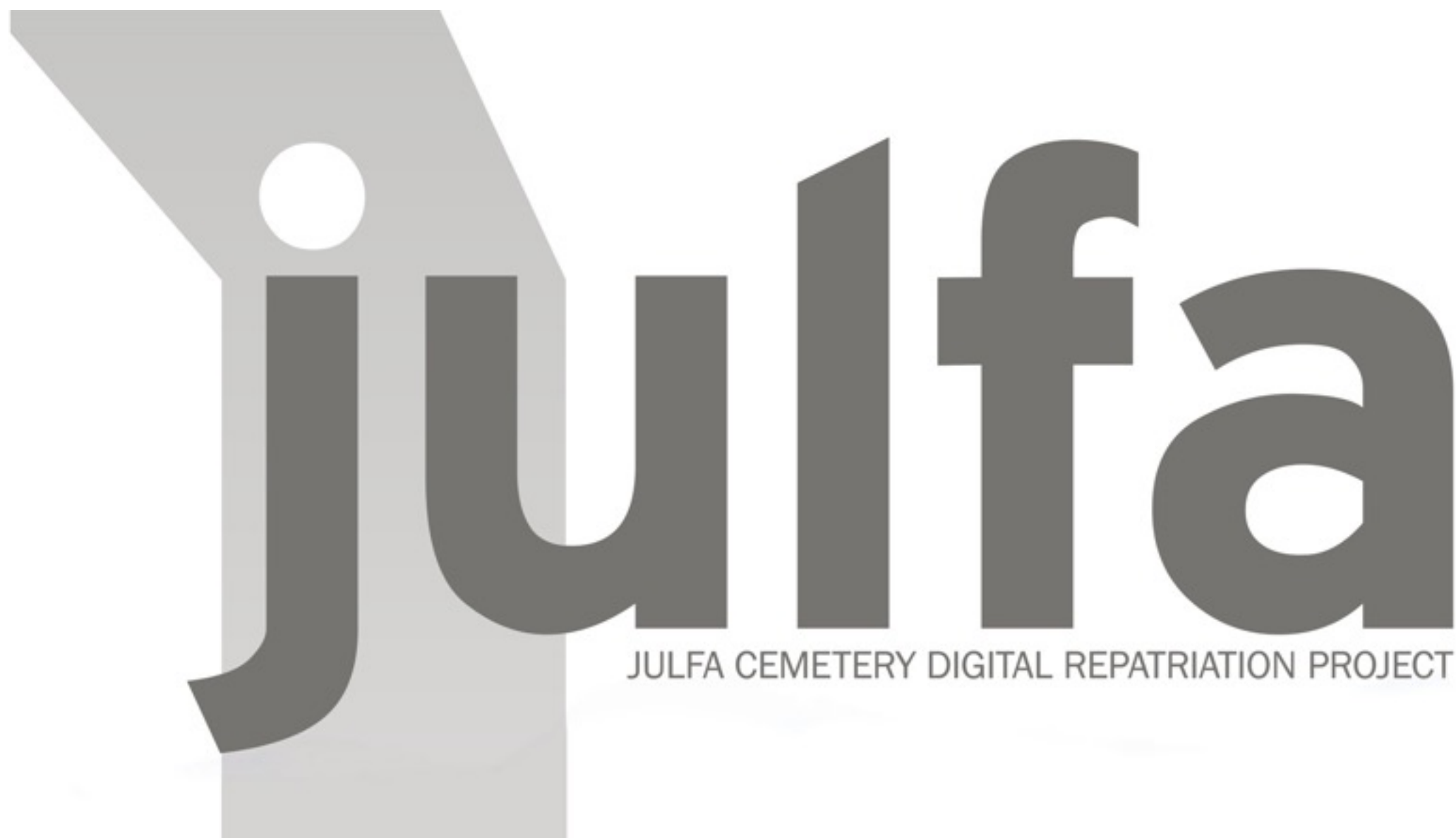
Maryland Institute for Technology in the Humanities

29 March 2016

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JULFA CEMETERY DIGITAL REPATRIATION PROJECT

Julfa Cemetery Digital Repatriation Project

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THE ARGAM AYVAZIAN DIGITAL ARCHIVE







The Ancient Cemetery at Julfa (Jugha)

- The most extensive and significant Christian cemetery established by the first nation to adopt Christianity (early 4th Century)
- Tombstones from 4th Century, but also pre-Christian pagan stones, and built on site of much earlier burial ground, 3C BC or earlier...
- Since 1920s in Azerbaijan, on banks of Arax River, border with Iran
- Especially important funerary monuments from 16th & 17th Centuries, but cemetery continued in use to end 19C / early 20C
- Over 10,000 tombstones at the height of its importance
- Neglected by Azerbaijan in 20C, but then destroyed, with final destruction in 2006 (filmed by an Armenian priest from Iran)













Armenian cemetery of Djulfa khatchkars in ruins.

Photo: Research on Armenian Architecture, 1998



Azerbaijani soldiers broke the remaining cemetery stones (*dabanakars*) with sledgehammers and axes.

Photo: Armenian Apostolic Church Diocesan Council, Tabriz, Iran – 12/2005

Destruction of the Armenian Cemetery in Djulfa, Nakhichevan (Azerbaijan)



The broken cemetery stones were rolled down into the Arax river.

Photo Credit: **Armenian Apostolic Church Diocesan Council, Tabriz, Iran – 12/2005**

Destruction of the Armenian Cemetery in Djulfa, Nakhichevan (Azerbaijan)



Photo: Armenian Apostolic Church Diocesan Council, Tabriz, Iran – 12/2005

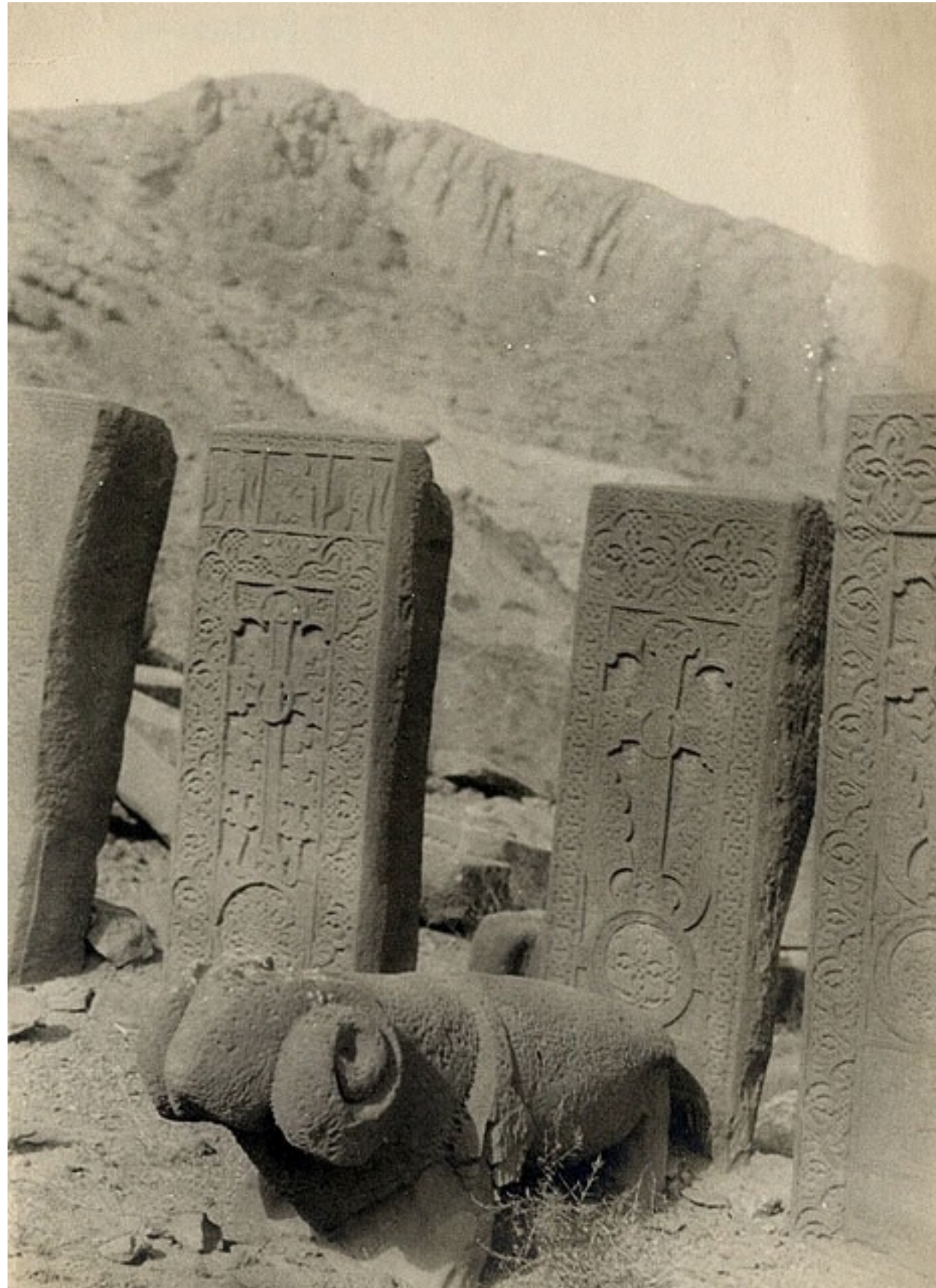






Julfa Cemetery - Cultural Significance

- Julfa represents cultural heritage of huge importance to Armenians
 - in part because it linked them to their earliest Christian roots
 - in part because its destruction is seen by Armenians as symbolic of international indifference to the Armenian Genocide of 1915 and to continuing Armenian cultural genocide
- The Julfa project has strong support from many Armenian communities:
 - the Armenian church and civil authorities in Armenia, and - it seems - all Armenians living there;
 - the Armenian diaspora in Sydney (40,000)
 - the Armenian diasporas around the world (largest in USA)
- Community engagement is crucial to the project





Khachkars

- 'Khachkars' are intricately carved cross-stones - unique to Armenian culture
- Each was carved to commemorate an individual (or sometimes an event), as a prayer in stone interceding with the divine
- So each khachkar is unique, relating to a specific person or event, but the designs incorporate recurring motifs
- In Armenian theology a khachkar is a 'gate' between earth and heaven, so are found in contexts other than cemeteries, e.g. in towns and villages - useful if no church is nearby
- Created as funerary monuments only for 'important' people; 'ordinary' people had tombstones
- Khachkars face west with head of buried person towards the East; so s/he and mourners are facing towards the Second Coming of Christ

The cornice depicts the last judgement. Christ, on a throne, is surrounded by angels, animals and the four evangelists (symbolised by the lion, ox, eagle and man)

SACRED THIRD - the tripartite structure emphasises the role of the cross as an intermediary between God and human beings. The cornice is reserved for images of sacred beings: Christ, angels and often the four evangelists.

The Armenian Apostolic cross rarely, if ever, depicts a human form on it. Rather, the cross is treated as a symbol of the all-bearing tree. Some khachkars show the cross laden with fruit (such as grapes or pomegranates). The fruit can be understood as a metaphor for Christ's blood, which ferments and becomes wine as it falls to the earth. The arms of the cross are bifurcated to symbolise its perpetual reproduction.

The Rosette, or solar disc, symbolises Earth and the cosmos. Here it also represents Golgotha. In Eastern Christianity it is said that Christ was crucified on the very site where Adam, the first man, was buried.

The inscription on the base of a khachkar speaks about the deceased and is intended as a "living prayer" to be read out on judgement day.

PROFANE THIRD - this part of the khachkar is reserved for images and inscriptions describing the deceased. It is the Human realm.

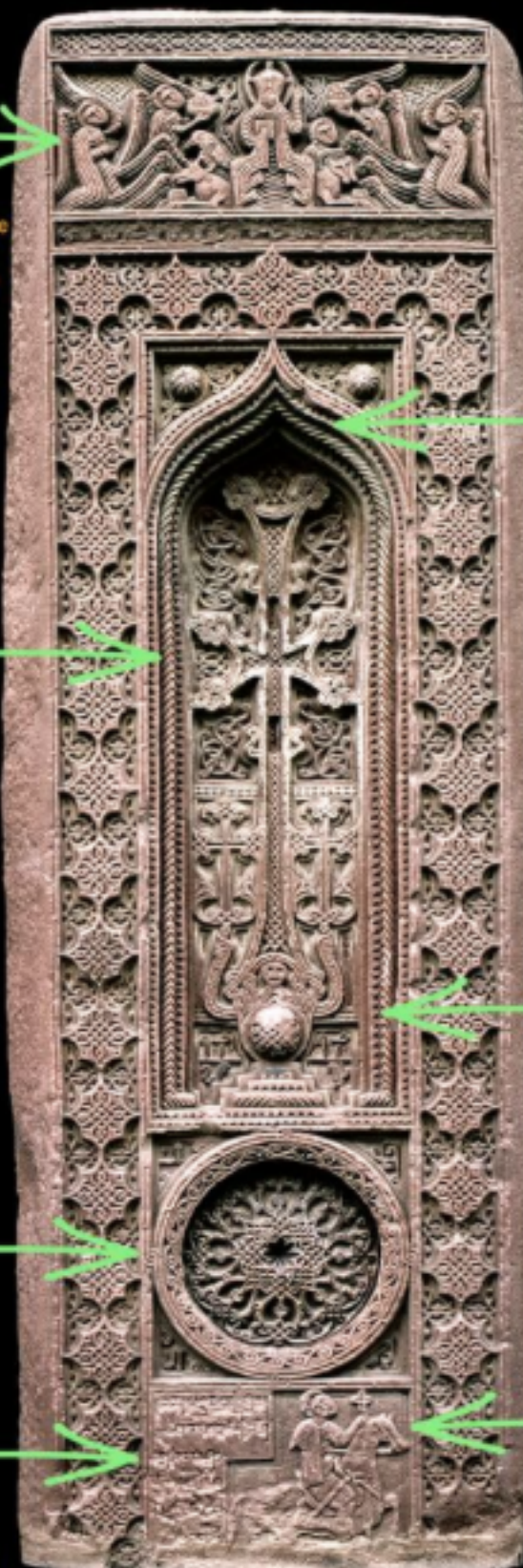
All khachkars face west so they are backlit in the morning and frontlit in the afternoon. Because Christ is supposed to return from the East, the deceased is buried with feet toward the khachkar. This way the buried person and the mourners, face toward the East to see the khachkar and also the coming of Christ.

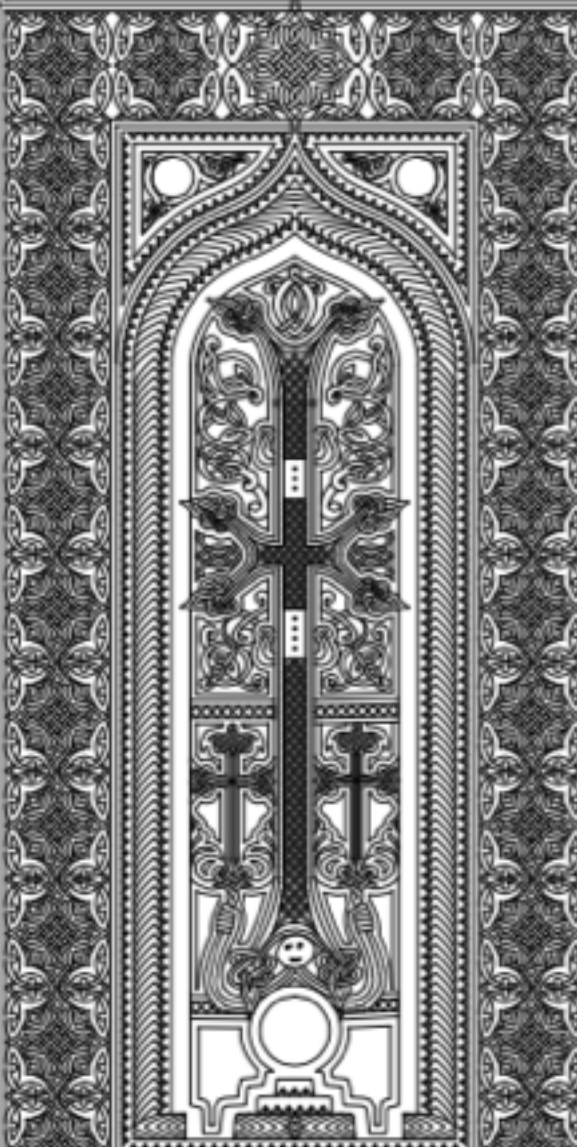
Julfa khachkars are often over 2 meters in height and are generally narrower than other khachkars. They are often characterised by the red colour of their stone and the multilayered pointed arch above the cross. This arch, which reveals the influence of Islamic art and monuments in the region, is almost unique to Julfa's khachkars.

NEUTRAL THIRD - here the cross is a quiet focus point. Fine lines create an impression of upward growth. This reinforces the idea of the cross as an intermediary, a symbol connecting human beings with God.

In this khachkar we see the skull of Adam under the cross. He reaches up out of the earth to grasp the arms of Christ - or, in this khachkar, to raise his own crosses. Through this metaphor, Christ becomes the new Adam, a perpetual circle of life, death and transformation. Sometimes the face of the deceased is shown here instead of Adam's skull. In this case the face and arms are fleshed out rather than consisting of bare bones (as in the case of Adam).

The lowest third of the khachkar normally depicts the deceased and his or her positive attributes. The horse often symbolises bravery.









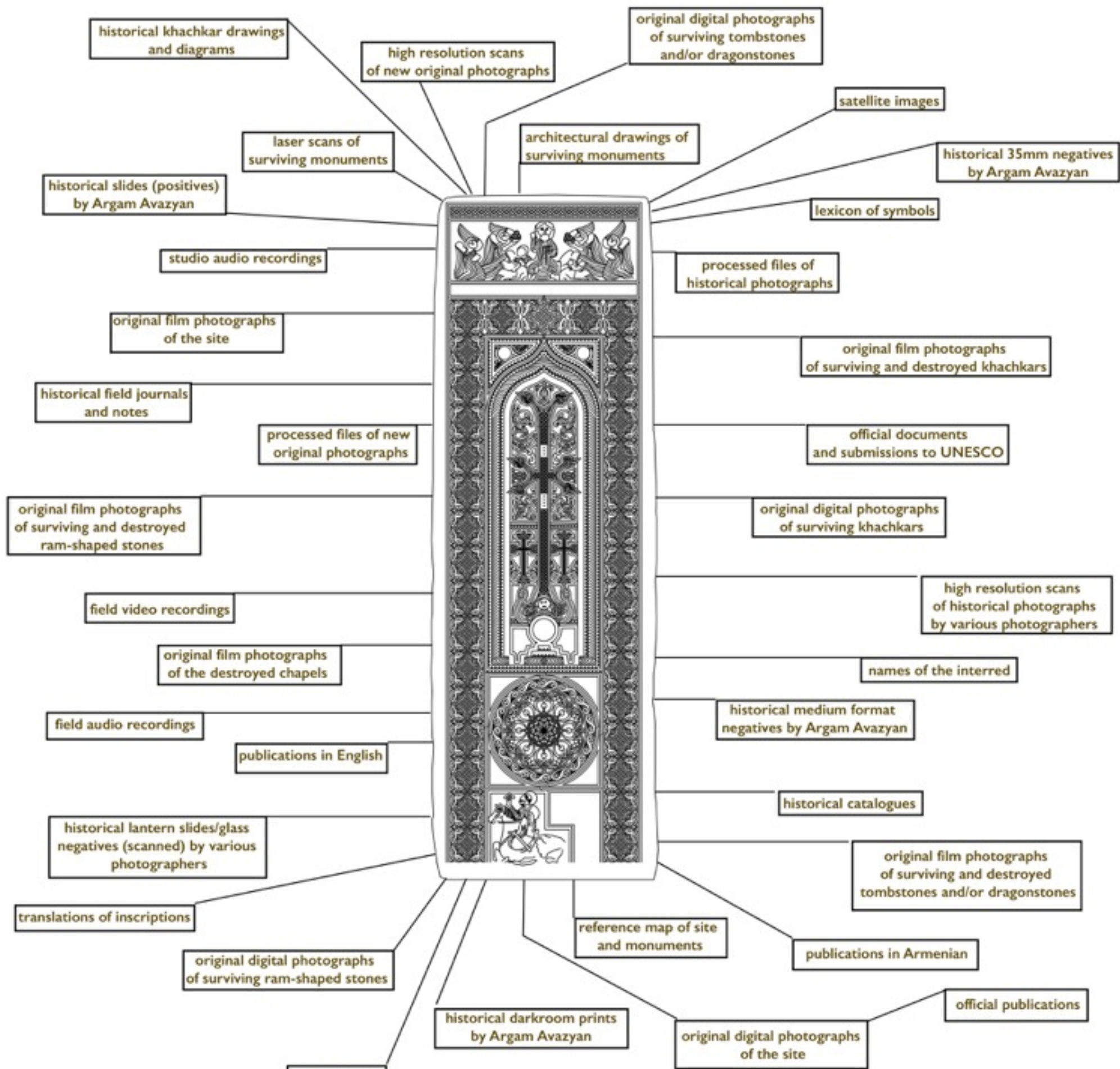






The Julfa Cemetery Digital Repatriation Project

- Purpose: to recreate virtually as faithfully as possible the lost heritage
- Resources:
 - Lantern slide photographs by Aram Vruyr and Jurgis Baltrušaitis
 - **Argam Ayvazyan Archive: 2,000 photographs over 25 years**
 - Other old photographs; new digital photographs; documents
 - Satellite images from AAAS project 2013-14
- Outcomes:
 - Two permanent 3D installations in Yerevan & Sydney; touring version
 - Virtual reality model available online
 - Substantial digital & physical archive in Sydney
 - Publications, conferences, workshops



Project progress

- *Field trip 1: initial information gathering; assess significance to Armenian communities; assess availability of data; identify collaborators*
- *Field trip 2: report on progress; identify new resources & collaborators*
- Field trip 3: follow up on outstanding resources
- Pilot 3D model of an extant khachkar (exhibited at DH2015)
- Contact with relevant & interested cultural heritage projects
- Research on stones & symbolism is under way



JULFA CEMETERY DIGITAL REPATRIATION PROJECT

Apply algorithms to govern kinetic elements – bird flocking, river video/audio, Doppler effect for moving past chapels with music, depth of field changes for eyeline or movement

Drop each khachkar, ramshaped stone, tombstone and dragonstone into the footprint corresponding with its identity number. Using photogrammetric data, resize and reposition the stone to its correct height, width, depth and orientation. Represent the weight of the stone. Attach written data (in Armenia and English) to each stone – explanation of symbols, translations of inscriptions, historical data, archaeological and cultural data etc.

Field Trip 3 to make laser scans and architectural drawings of all existing Julfa monuments in Etchmiadzin, Georgia, Iran, St Petersburg and Geneva, complete photographs of all existing Julfa monuments, photograph the Azerbaijan Julfa cemetery site from the other side of the Arax river in Iran, audio/video field recordings of the Julfa cemetery site (including river, birds etc) and recordings of local liturgies, kinetic elements on location (birds, clouds, grasses, trees, river etc)

Map created from composite satellite & topographical photographs, gridlines added, monument footprints to be numbered. All photographs of stones to be referenced according to identity numbers of monuments. Each monument's identity number to be accurately cross-referenced with the footprint identity number on the reference map. Any footprints unaccounted for to be designated missing and marked with a generic stone or sketch. Each monument cross-referenced with written research including translations of all inscriptions

Field trip 4 to create scans of all existing lantern slides and glass negatives; Baltrušaitis lantern slides in Paris, misc. glass negatives in the Yerevan History Museum, Ermakov glass negatives in Tbilisi, Ališan drawings, Matanederan manuscripts

photogrammetry to determine exact heights, widths, depths and orientation of all stones as well as geographical features of the site

Large 3D environment to include horizon, sky, ground, Arax river, three chapels in the cemetery, one chapel across the river in Iran, trees and other landmarks

Project research

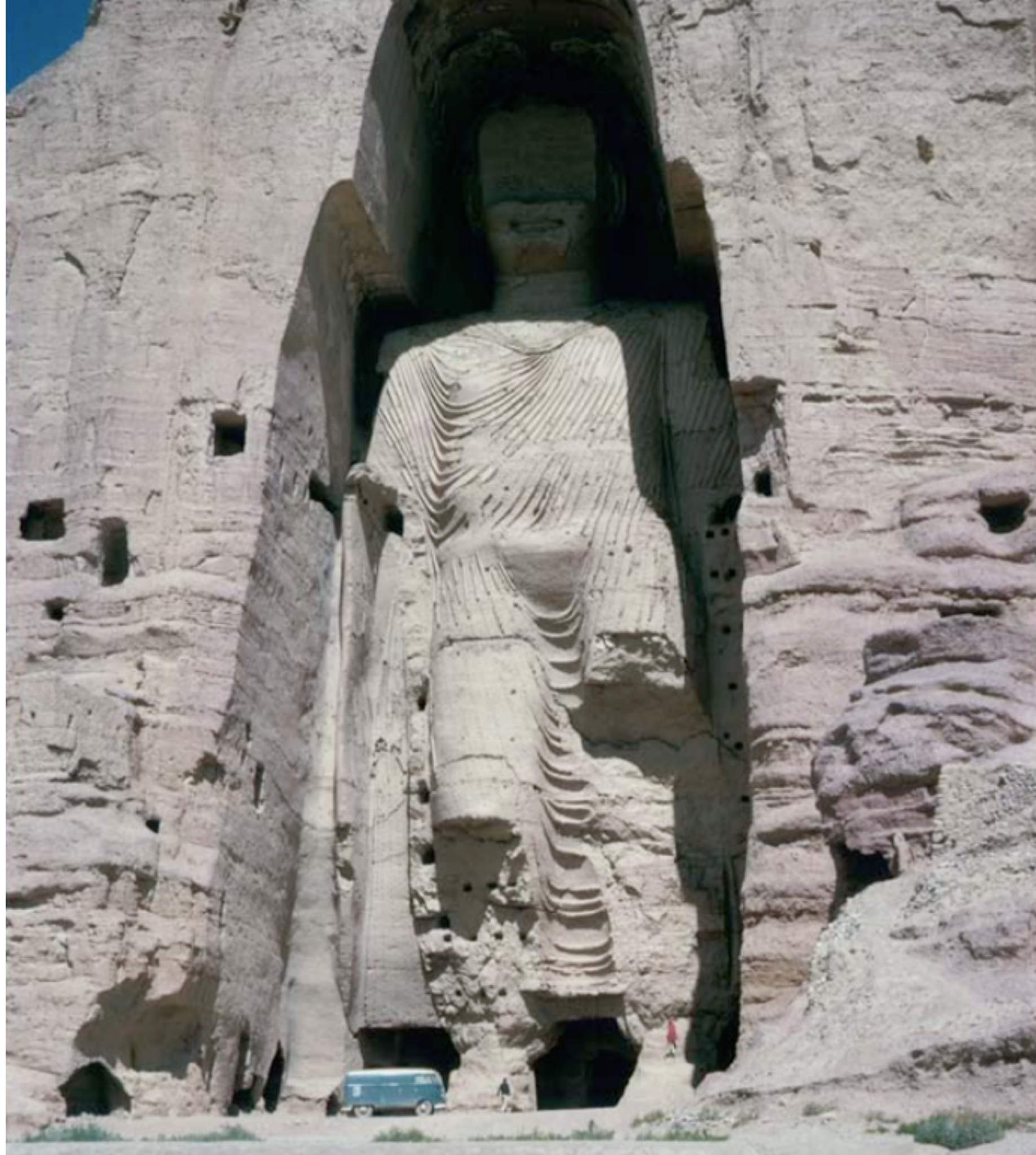
- Symbols used in khachkars - some areas of contested opinions plus some gaps in knowledge arising from the 1915 genocide
- Each stone - to identify & honour the individual it commemorates
- Position of each stone in the cemetery - using all the different resources available
- Technology research to enable creation of permanent 3D installations that are sufficiently 'real' they can be used not only for information and education, but also for ritual
- Researchers from: archaeology; architecture; stone carving; history; cultural history; theology & Armenian church history; photography & photogrammetry; sound; digital humanities

Digital Repatriation...

- Making available lost or fragile cultural heritage by digital means
- Needs to be community-based
- Technology must be appropriate to the community and purpose
- Opportunities for collaboration at project and technical levels
- Wide range of national and international contexts & projects

Digital Repatriation : *to counter cultural genocide*

- Making available lost or fragile cultural heritage by digital means
- Needs to be community-based
- Wide range of national and international contexts & projects
- Technology must be appropriate to the community and purpose
- Opportunities for collaboration at project and technical levels
- **Of growing importance in a context of rapid escalation internationally of cultural genocide**



julfa

JULFA CEMETERY DIGITAL REPATRIATION PROJECT



RESEARCH TEAM

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ABOUT THE JULFA PROJECT

The historic cemetery of Julfa, *Ջուֆայի քաղաքի շրջանում*, stood until 2008 on the banks of the Arax river between Iran and Azerbaijan, west of the ruined city of Julfa. Culturally and historically unique, Julfa was one of the oldest Christian cemeteries in the world. At its peak it held more than 30,000 intricately carved khachkars (cross-stones) dating from the 14th century and very ancient tombstones. Julfa was the most extensive cemetery in Armenia and held the most significant collection of khachkars anywhere in the world.

Of these sacred artifacts, once found on the banks of the Arax River, none now remain. From 2008 the cemetery was subjected to systematic, violent destruction by military forces and, between 2005 and 2006, was deliberately destroyed. Significant efforts were made by the Armenian Government to alert the international community to the destruction of this cultural heritage, including formal approaches to UNESCO, but the world was not listening. Shortly after the total destruction of Julfa cemetery, UNESCO included Armenian khachkars on its list of Intangible Cultural Heritage.

In 2013 a small research team travelled to Armenia in search of traces of the destroyed Julfa cemetery. Our aim was to uncover enough primary sources—photographs, maps, satellite images, documents and so on—to create a virtual Julfa 3D cemetery, a digital heritage reconstruction. The results of our research in Armenia, together with a collection of photographs, was published in the ebook, *“Recovering a lost Armenian cemetery”*. That job has now become an ongoing research project hosted by the Institute for Social Justice at the Australian Catholic University and Manning Clark House. We are working with cutting edge 3D visualisation tools, expanded human rights photography and traditional scholarship to digitally recreate the entire medieval cemetery as an interactive installation.

The world has become a dangerous place for monuments and we recognise that similar repatriation projects may arise in the near future to address recent losses in the Middle and Near East. To assist such projects, and in the spirit of collegiality, we will be continuously updating our project outcomes and methodologies to this site. We have also established this site as a place where members of the public can interact with us through our information lists, knowledge of the month and volunteering program. This project has been established

PROJECT DESCRIPTION

The Julfa Cemetery Digital Repatriation Project aims to return the 2000 medieval UNESCO intangible world heritage khachkars from Julfa to the Armenian people. The project outcomes will include two permanent 3D installations, in Yerevan, Armenia and Sydney, Australia, as well as an international touring installation. These three installations will present the 2000 khachkars in a 3D virtual reconstruction of Julfa cemetery's geographical location in what is now Azerbaijan. Further outcomes will include an online virtual reality version of the cemetery installation; a permanent archive of historical photographs, facsimile illustrated manuscripts, maps, journals and other documents available online and from The Australian Catholic University; online and face-to-face workshops in best practice digital repatriation; published books and papers and international conferences on digital repatriation of destroyed cultural monuments in the Near East and Middle East.

Methodologies, primary and secondary sources, internet and physical resources and regular project updates will be provided on this website in order to facilitate and support other digital repatriation projects. This project is hosted by The Australian Catholic University and Manning Clark House.

julfaproject.wordpress.com

A collection of photographs and expedition resources are available on our website, where you can also find contact details.

Photographs of surviving and destroyed khachkars can be found here: julfaproject.wordpress.com/gallery

The largest Armenian archive of historical photographs can be found here: julfaproject.wordpress.com/the-argem-archival-archive

This is an extension of the Julfa project, Australian Catholic University, Manning Clark House and The River Library at UNSW.

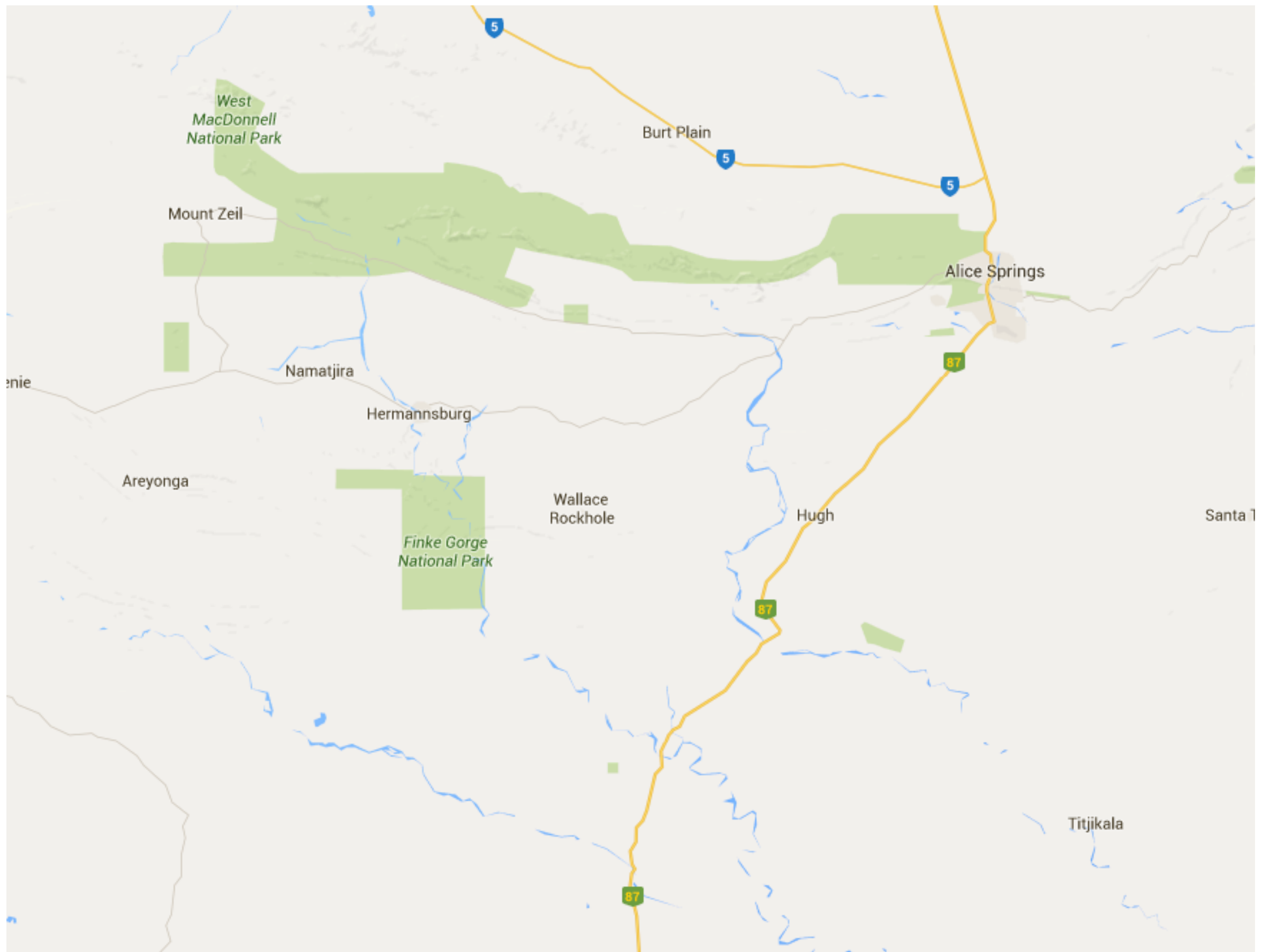
To support the Julfa Project, please visit julfaproject.wordpress.com/donate











Journey to Horseshoe Bend

- TGH Strehlow archive of films, sound recordings, photographs, documents, objects - housed in Museum of Central Australia, Alice Springs
- Ceremonial life of Arunda* people is a particular focus; many sacred ceremonies & objects
- Much of archive digitised as part of JHB project (Hart Cohen)
- One of many Australian projects concerned with *digital repatriation*
- Community engagement - e.g. 'digital story telling'
- *Alternative spellings: Arrernte; Arrente; Arrarnta; Arranta*





Journey to Horseshoe Bend

Introduction to the Media Gallery

Welcome to the Media Gallery for the Journey to Horseshoe Bend project.

Images, audio and film have been collected from various sources across Australia. The collection displayed represents only a small selection of the material collated for the 'Journey to Horseshoe Bend' project. The materials have been sourced from archives, museums, universities, libraries and private collections.

Important note and Indigenous warning

This site contains Indigenous content. To many communities, it is distressful and offensive to depict persons who have died. Indigenous communities that may be affected are warned that this website, including film clips, may contain such scenes. Please also be aware that many of the photographs and films in the collection are records of their time, with language use and attitudes that reflect that period in history.

For information relating to Sources and Copyright please see link in the menu.

THE PROJECT

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- [Carl Strehlow](#)
- [Theo Strehlow](#)
- [Heinrich](#)

> [Places](#)

- [Finke River](#)
- [Horseshoe Bend](#)
- [Hermannsburg](#)

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- > [Alice Springs Blacks](#)
- > [Half-Caste Children](#)
- > [Heemansburg](#)
- > [Horseshoe Bend Hotel](#)
- > [Prisoners Cattle Spearing](#)

Music

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THE ARCHIVES

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PLACES

Finke River | Horseshoe Bend | Hermannsburg

Finke River
Mission Station, Hermannsburg

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[Close X](#)



[All Photos ↑](#)

4 of 5

Source: Strehlow Research Centre Photo by: Otto Tschirn

Finke River Hermannsburg Mission Church (exterior)



[All Photos ↑](#)



[All Photos ↑](#)

Journey to Horseshoe Bend

Lubras washing in the Finke

Close X



All Photos ↑

3 of 5

Source: Strehlow Research Centre Photo by: Otto Tschirn

> Song 3

THE ARCHIVES

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Journey to Horseshoe Bend

Finke in flood 1918

Close X



All Photos ↑

4 of 5

Source: Strehlow Research Centre Photo by: Otto Tschirn

> Song 3

THE ARCHIVES

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Journey to Horseshoe Bend

Objectives

Key objectives of the project;

- Education
- Preservation of language, culture and traditional knowledge
- Knowledge sharing, creation and transfer
- Encouraging the use of new media and technology in remote Australia
- Story telling and engagement with Digital Humanities to enhance social cohesion

THE PROJECT

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THE ARCHIVES

Mr Strehlow's films

Film Australia

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	Mr Strehlow's films [videorecording]. Lindfield, N.S.W. : Film Australia,	2001	English	Video	27
	Mr. Strehlow's films / a film by Hart Cohen. [videorecording] / Lindfield, N.S.W. : Film Australia, 1 videodisc (DVD) (52 min 27 sec) : sd., col., with b&w sequ...	2001	English	Video	15
	Mr. Strehlow's films / written and directed by Hart Cohen, producer, Adrian Herring. [videorecording] /	2003	English	Video; Captioned	2
	Mr. Strehlow's films / a film by Hart Cohen. [videorecording] / 1 videocassette (VHS) (52min) : sd., col., with b&w sequence...	2001	English	Video	2
	Mr. Strehlow's films / written and directed by Hart Cohen, producer, Adrian Herring. [videorecording] /	2006, 2003	English	Video;	1

Digital Repatriation...some questions

- Who 'owns' cultural memory - e.g. artefacts / archival materials?
- Should anyone have a power of 'veto' (or other form of absolute control)?
- How to deal with competing 'claims'?
- How to bridge the gap between 'then' and 'now'?
- How to deal with materials or descriptions now considered inappropriate or even offensive?

Office of Aboriginal and Torres Strait Islander Employment and Engagement

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 - Significant dates
 - 'Generations of Knowledge' Virtual World
 - Generations of Knowledge

'Generations of Knowledge' Virtual World

Generations of Knowledge - exploring a virtual world pre contact 1770

Presentation Trailer

Presentation trailer for the Virtual Exploration - Pre Contact project, picturing life of a Darug clan around year 1788.



search PARADISEC

PARADISEC QUICK LINKS

Do you want to deposit
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CFP - PARADISEC 2013
conference

Australasian Association
for Digital Humanities
Inaugural Conference,
March 2012

PARADISEC in the Press
- listen to Nick Thieberger
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PARADISEC NEWS -
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(EthnoER)

Endangered Languages &
Cultures Blog

PARADISEC

The Pacific and Regional Archive for Digital Sources in Endangered Cultures offers a facility for digital conservation and access to endangered materials from all over the world. Our research group has developed models to ensure that the archive can provide access to interested communities and conforms to emerging international standards for digital archiving. A primary motivation for this project is making field recordings available to those recorded and their descendants. While initially conceived of as an archiving project focusing on the Asia-Pacific region, PARADISEC has developed into a centre for activities including:

- **Training** in data management (lexicographic software and transcription and interlinearising of texts), recording techniques and data linkage
- **Provision of a catalogue** in which users can create descriptions of their collections
- **Standardized Metadata** - creating the descriptions in forms that conform to relevant standards and are harvested by the **Open Archives Initiative** search engines, enabling access for a wider community
- **Building models** that show how to make reusable data (e.g. **ExSite9**) and using current tools such as **Elan** and **Toolbox**
- **Building models** that show how to reuse data (e.g. **EOPAS**, online dictionaries, **iTunes repositories**)
- **Cultural preservation** – backup and data provision for cultural agencies in the region (e.g. Institute for PNG Studies, Vanuatu Cultural Centre)
- **Global Focus** – meeting the demand to house files with a research focus from all over the world (including USA, Chile, Mexico)



[How you can help](#)

[Basic metadata describing PARADISEC's collection](#) can be freely and easily searched through [OLAC](#), [ANDS](#) or the [LINGUIST LIST](#) gateway. Access to the more detailed internal catalogue records is available here: <http://catalog.paradisec.org.au>.

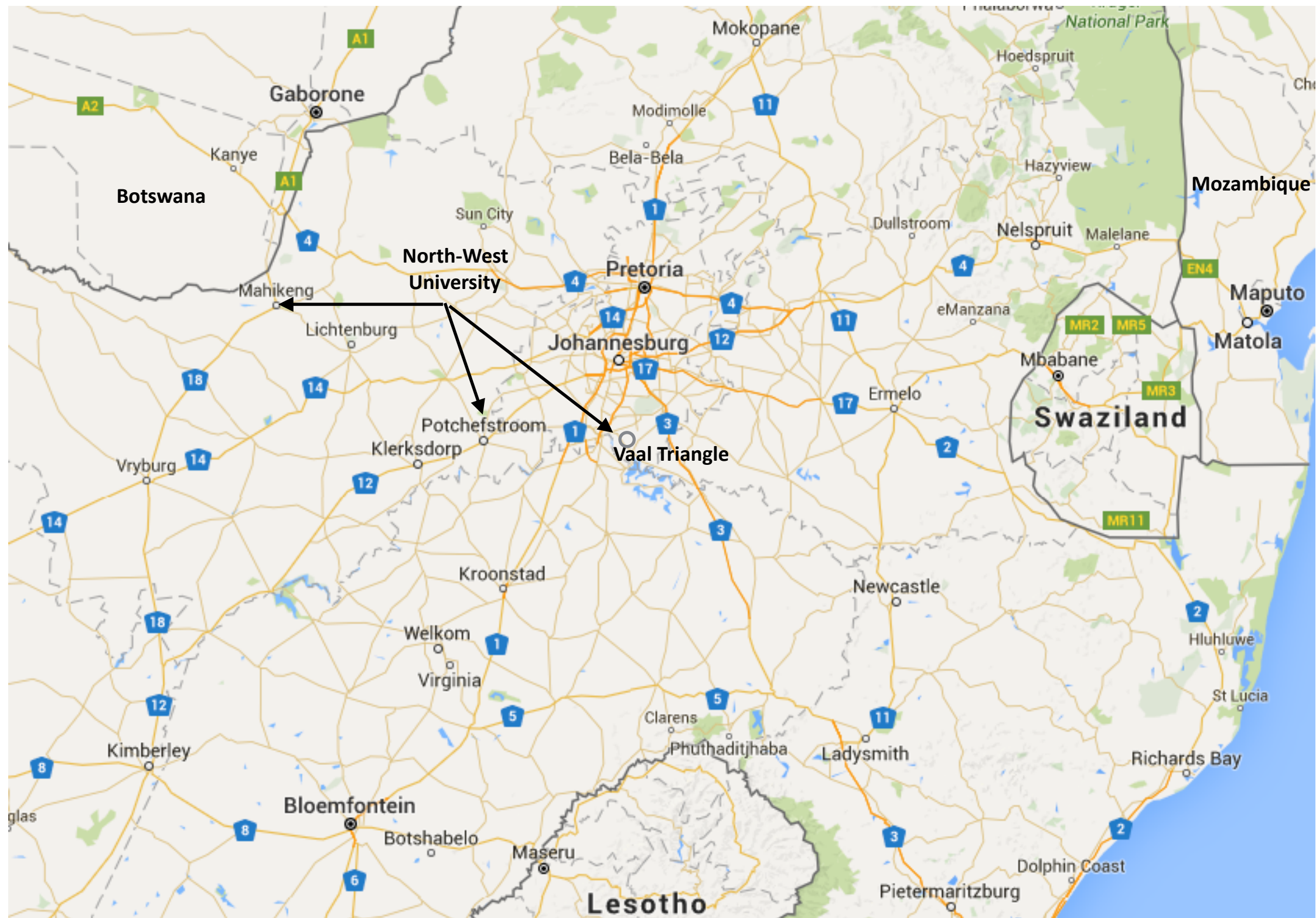
Access to data in the PARADISEC repository is available to those who have signed an [access form](#). A nominal fee may be charged for files delivered on CD/DVD. Completed forms should be posted or faxed to PARADISEC ([Sydney](#)).

PARADISEC has been funded by the Universities of [Sydney](#), [Melbourne](#), [New England](#), [ANU](#) the [Australian Research Council](#) and [Grangenet](#).

View a glossary of [acronyms](#)



Data Seal of
Approval





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QUICKLINKS



South Africa: Official languages

- Afrikaans
- English
- Ndebele
- Northern Sotho
- Sotho
- Swazi
- Tsonga
- Setswana
- Venda
- Xhosa
- Zulu



*English -
everywhere*

*Setswana
Sotho*

Afrikaans

Xhosa

*Ndebele
Tsonga
Venda
Swazi
Northern
Sotho
Zulu*



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Worth a look

CText® makes a major contribution to multilingualism with Autshumato

The Centre for Text Technology (CText®) at the North-West University (NWU), Potchefstroom Campus, is facilitating translation and communication in South Africa through the Autshumato machine translation project.

Autshumato is a collection of open-source translation software and tools that are developed and managed by CText®. It is already being used by the National Language Service, translators in parliament, the NWU Institutional Language Services, the University of Johannesburg as well as the University of the Free State and has been downloaded internationally by users in China, Spain, Denmark and Norway, among others. [Read more](#)

Quick links

Afrikaanse SkryfGoed

Proofing tools for Microsoft® Office.



Autshumato Integrated Translation Environment (Open-source)





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Useful links



- Corpora from gov.za for 10 languages
- Custom dictionaries for 10 languages
- isiZulu corpus from gov.za
- List of Tshivenda words containing diacritics (ǀ, ǁ, ǃ, ǂ, Ǆ, ǅ, ǆ, Ǉ, ǈ, ǉ)
- NWU Bible corpus
- Training data for Lia 1.0.0.
- Tswana Learner English Corpus
- WebCrawler



Centre for Text Technology (CText) Language Resource Management Agency

South Africa boasts its very own Language Resource Management Agency (RMA) for the management and distribution of reusable digital text and speech resources for all of the country's official languages. These resources are crucial for research and development in the domain of human language technologies (HLT) for application to local languages.

Examples of HLT applications are

- automated telephone information systems,
- GPS systems,
- spelling and grammar checkers,
- machine translation systems that function in various South African languages, etc.

These types of applications are increasingly being used on mobile devices, giving South Africans unprecedented access to information and services in local languages.

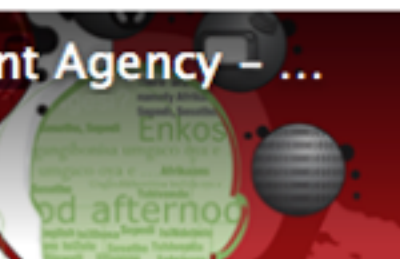
The Department of Arts and Culture's National Centre for Human Language Technologies is funding this exciting initiative, which is in line with similar global initiatives. CText has been appointed to establish the RMA, and to distribute reusable text and speech resources from this one central point.

Broad categories of data relevant to the RMA include text, speech, language-related video, multimodal resources (such as sign language), as well as pathological and forensic language data. Visit www.rma.nwu.ac.za for more information.



Language Resource Management Agency – ...

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Creating as well as recording cultural memory...some questions

- Who 'owns' cultural memory - e.g. artefacts / archival materials?
- What 'rights' do groups or individuals have:
 - for access to digital tools & resources?
 - for preserving 'their' cultural expression?
- How to deal with competing 'claims'?
- How to bridge the gap between 'now' and 'the future'?

Referenced websites

- Julfa Cemetery Digital Repatriation project:
<https://julfaproject.wordpress.com>
- Journey to Horseshoe Bend project
<http://pubsites.uws.edu.au/coa/soca/jthb/>
- North-West University: Centre for Text Technology (CTexT®)
<http://www.nwu.ac.za/ctext>
- *Language Resource Management Agency*
<http://www.nwu.ac.za/ctext/rma>

Professor Harold Short

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