

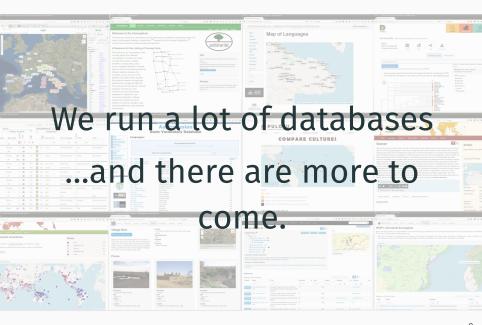
## Sustainable Databases

putting the base back into basic research

Robert Forkel

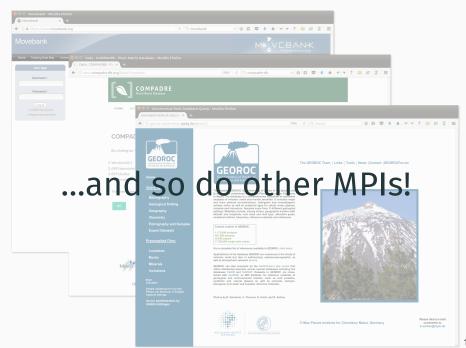
Matchmaking Workshop, December 6/7, 2017, Berlin

Max Planck Institute for the Science of Human History



### DATABASES AT MPI SHH

- · we run on databases
  - biggish collections of structured cross-cultural or cross-linguistic data
  - typically curated as sets of text files
  - · released versions published online
- · and we're trying to change the field
- · so at some point hopefully the field will run on databases



### DATABASES AT MPG

Clearly, databases play an important role in how MPIs conduct basic research.

### Some examples:

- Compadre DB at MPI for Demographic Research contains matrix population models for hundreds of species
- · Movebank at MPI for Ornithology provides animal tracking data
- GEOROC at MPI for Chemistry collects published analyses of rocks in a structured format.

ONTONG JAVA / MAIN (HIGH) PLATI



JACKSON M. G.(2015) [19784] Standards/Precision(Info) (GeoReM 8836) 192-1187A-006R-06W(110-129) JACKSON M. G (2015) [19784] Standards/Precision(Info) (GeoReM 8836.) 192-11874-006R-06W(110-129) JACKSON M. G.(2015) [19784] Standards/Precision(Info) [GeoReM 8836] 192-1187A-006R-06W(110-129) 192-1187A-006R-06W(110-129) JACKSON M. G.(2015) [19784] Standards/Precision(Info) (GeoRett \$235.) JACKSON M. G. (2017) [21069] Standards/Precision(Info) CHU 13-03 CHU 13-05 JACKSON M. G. (2017) [21069] Standards/Precision(Info) JACKSON M. G. (2017) [21069] Standards/Precision(Info) CHU 13-06 JACKSON M. G. (2017) [21069] Standards/Precision(Info) KOS 13-11 JACKSON M. G. (2017) [21069] Standards

oases are research

ONTONG JAVA / MAIN (HIGH) PLATI ONTONG JAVA / MAIN (HIGH) PLATI ONTONG JAVA / MAIN (HIGH) PLATI CAROLINE ISLANDS / CHUUK (TRU CAROLINE ISLANDS / CHUUK (TRU CAROLINE ISLANDS / CHUUK (TRU CAROLINE ISLANDS / KOSRAE

**Expert Datasets** 

Minerals

ts that others m

[GEOROC-ID 449 Tables] STAUDIGEL H., PAR THE LONGEVITY OF THE SOUTH PACIFIC ISOTOPIC doi: 10.1016/0012-821X(91)90015-A

[GEOROC-ID 2147 Tables] JANNEY P PETROLOGY AND GEOCHEMISTRY OF RA doi: 10.2973/odp.proc.sr.143.217.1995 [GEOROC-ID 2166 Tables] HEIN J. R. COBALT- AND PLATINUM-RICH FERROMAN

doi: 10.1016/0025-3227(88)90113-2 IGEOROCAD 2367 Tables 1 STRACKE A HED

RIFTING RELATED VOLCANISM IN AN OCEANIC POST [GEOROC-ID 2402 Tables] KRAMER W., KRA

MINERALOGICAL-GEOCHEMICAL STUDY OF THE TR [GEOROC-ID 2403 Tables] BECCALUVA L...! (HAYES, D. E.), AGU, WASHINGTON DC [1980] THE TECTONIC AND GEOLOGIC EVOLUTION OF SOU

dol: 10.1029/GM023p0247

[GEOROC-ID 2406 Tables] DIETRICH V. J., EN GEOCHEMISTRY OF BASALTIC AND GABBROIC RO doi: 10.1016/0012-821X(78)90149-8

[GEORGC-ID 2439 Tables] MINALY, ISHII T. TOMINAGA TI J. RADIOANAL, NUCL. CHEM. 137 [1989] 299-308 NEUTRON ACTIVATION ANALYSIS OF RARE EARTH ELEMENTS IN ALTERED VOLCANIC ROCKS (PALAGONITE) FROM A SEAMOUNT doi: 10.1007/BF02163555

NAPE

### BUT ARE DATABASES SUSTAINABLE?

- · Often, today, they seem to just die.
- The principle of "re-use keeping data alive" breaks down, when reuse is disconnected from data curation (e.g. happens in a different discipline)
- We still have to understand better what sustainability for databases means:
  - · different service levels?
  - · graceful degradation of service?
- But an Excel file stamped with a DOI should not be an acceptable vision for the future.
- There must be a middleground between bit-stream preservation and dumping bespoke web application on unsuspecting data centers.

### THEY SHOULD BE!

- · The CLLD project dealt with these issues ...
- ...and made it through at least one director "turning into a pumpkin".
- Some economies of scale can be realised, but more would be possible on a higher organisational level
- · Standardization helps but isn't easy.
- Tabular data and a way to link to media files goes a long way!
  Some building blocks are there:
  - · CSVW: Tabular data goes a long way toward generic databases ...
  - · GWDG CDSTAR: ...in particular when complemented by multimedia
  - · MPDL's DOI service to make databases citeable

# So what?

But many issues should be addressed on MPG level, not for individual institutes:

- · licensing
- domains
- · service levels

other issues would profit from MPG-wide shared practices, e.g.

- · a recommended technology stack
- · would simplify hiring and training

## So what?

Increasingly funding agencies ask for data management plans.

Correspondingly, research institutions should increasingly provide fitting building blocks for such plans.

Even better would be an approach integrating these building blocks with organisational boundary conditions.

- · Working group for a data(base) management plan for the MPG?
- · Do we need a **BAD** "Beratender Ausschuss für Datenbanken"?

