



C-SALT APIs - Connecting and Exposing Heterogeneous Language Resources

Overview

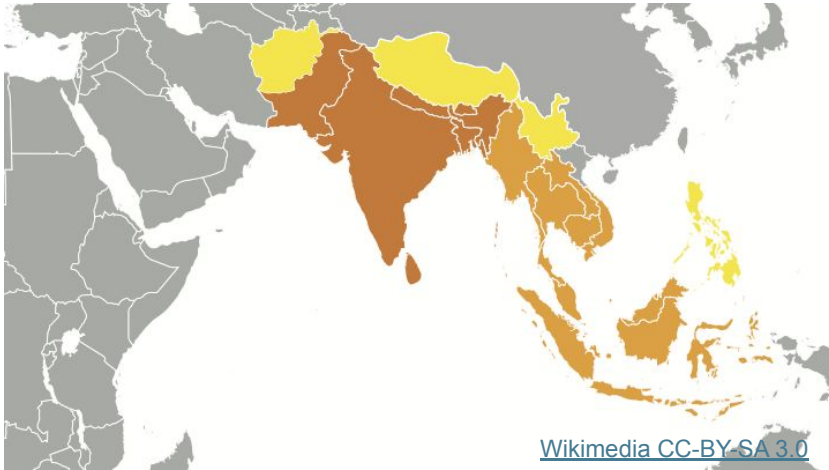
- C-SALT: Cologne South Asian Languages and Texts
- Sanskrit Dictionaries
- C-SALT APIs for Sanskrit Dictionaries
- Kosh - APIs for Dictionaries
- VedaWeb

C-SALT

Cologne South Asian Languages and Texts



Greater India:



- Sanskrit Dictionaries
- Sanskrit Texts
- Pāli Dictionary
- Nuristani Texts
- Nuristani Audio
- ...

C-SALT

Cologne South Asian Languages and Texts



Cologne D

UNIVERSITÄT ZU KÖLN

Welcome to the Sanskrit lexicons prepared since 1994 by The 36 dictionaries are organized primarily by the second. Each dictionary has several types of display (B L A M), as

Sanskrit-English Dictionaries

ID	date	Dictionary
WIL	1832	Wilson Sanskrit-English Diction
YAT *	1846	Yates Sanskrit-English Diction
GST *	1856	Goldstücker Sanskrit-English Dic
BEN *	1866	Benfey Sanskrit-English Diction
MW72 *	1872	Monier-Williams Sanskrit-Englis
AP90 *	1890	Apte Practical Sanskrit-English D
CAE	1891	Cappeller Sanskrit-English Diction
MD	1893	Macdonell Sanskrit-English Diction
MW	1899	Monier-Williams Sanskrit-Englis
SHS	1900	Shabda-Sagara Sanskrit-English D
AP	1957	Practical Sanskrit-English Diction
PD *	1976	An Encyclopedic Dictionary of Sa

English-Sanskrit Dictionaries

MWE *	1851	Monier-Williams English-Sanskrit Dictionary	B L A M D
BOR *	1877	Borooah English-Sanskrit Dictionary	B L A M D
AE	1884	Apte Student's English-Sanskrit Dictionary	B L A M D S1 S2 Deaccessated

Critical Pali Dictionary

Search: avitakka

3 entries found.

1. ¹a-vitakka
2. ²a-vitakka
3. Avitakka

Text Versions

Lubotsky (Zurich) Ⓞ

a agnīm iḷe purōhitān
b yajñāsya devām rtvjām
c hótāraṃ ratnadhātāmam

Devanagari (Eichler) Ⓞ

अग्निमीळे पुरोहितं यज्ञस्य देवमृत्विजम्
होतारं रत्नधातमम्

Translations

Griffith (en) Ⓞ

I laud Agni, the chosen Priest, God, minister of sacrifice,
440.29 (— 441.11); — also n. (as from next), = dutyam
jñānaṃ, Paṭis-a I 140.3.

VedaWeb beta
Rigveda online

Lubotsky (Zurich) ▾ ⤵ HK or stanza no.

Accent-sensitive Ⓞ
 RegEx Ⓞ

Hymn #: 1
Hymn addresser:
Hymn group: Hym
Strata: N Ⓞ

< 01 ▾ 001 ▾ 01 ▾ >

Text Versions

Lubotsky (Zurich) Ⓞ

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C-SALT

Cologne South Asian Languages and Texts


About C-SALT

Cologne South Asian Languages and Texts (C-SALT) provides an overview of projects and digital resources related to South Asian languages, texts, and culture at the University of Cologne. C-SALT coordinates the activity of these projects and supports their sustainable development.


Projects and Resources



Cologne Sanskrit Lexicon



Critical Pali Dictionary Online



VedaWeb



Cologne Sanskrit Dictionaries

TEI

XML

digital

print

- 37 dictionaries
- Open data
- TEI-P5
- Several interfaces
- Integration with texts
- APIs

```
TEI
35 <xml:lang="san-Latn-x-SLP1">0pavAsika</orth><idno
36 ana="hcl">2</idno><hyph ana="key2"
37
38 <xml:lang="san-Latn-x-SLP1-headword">0pavAsika</hy
39 </form><sense-gramGrp>gram
40 </form><lex>mfpc ana="p"
41 unit="round-bracket-left"</></pc>
42 type="suffix">I</m><pc ana="p"
43
44 unit="round-bracket-right"</></pc>.</gram></gram
45 fit or suitable for a fast
46 <abbr>ref
47 target="#abbr-g">g.</ref></abbr>
48 <ref="#glyph-srs"/></dis/>
49 <cit type="Literary_source">
50 <bibl xml:lang="san-Latn-x-CSDL"><
51 target="#auth-Pal2">Pal2.</ref> 4-4,
52 103</bibl>
53 </cit><note><ref target="#page-0238">
54 type="facs">238,3</ref>
55 <idno ana="L"
56 nls="monier_41100">41100</idno></note></sense
57 ana="H2A"
58 ></gramGrp></gram ana="lex"
59 value="lnh">mfpc ana="p" unit="round-bracket-let
60 </></pc>
61 <xml:lang="san-Latn-x-SLP1" type="suffix">I</m><pc
62 ana="p"
63
64 unit="round-bracket-right"</></pc>.</gram></gram
65 able to fast <abbr>ref
66 target="#abbr-g">g.</ref></abbr>
67 <ref="#glyph-srs"/></dis/>
68 <cit type="Literary_source">
```

```
<H1>503{aMh}1{aMh}1! {<cf."1"#{aGgh)}
1.1.A1. #aMhate} ; {<to...go...set...out...
commence} <L.} ; {<to...approach
<L.} ; {<cl.10. .P. #aMhayati} ; {<
send, <Bhat2t2} ; {<to...speak
<Bhat2t2} ; {<to...shine} <L.} _
MW000068

<H2>100{aMhri}2{aMhri} ; *m. <a...foot>
<Hpar.}
<H4>100{aMhri}2{aMhri} ; *m.0 root...of...
tree} <L.}
<H4>100{aMhri}2{aMhri} ; *m.l
({<cf."#{aGghri}.}) MW000069
<H3>100{aMhri}3{aMhri--pa} ; *m. <"...
root-drinker..."...<a...tree} <L.} MW0000
<H3>100{aMhri}3{aMhri--skandha}
<H3>100{aMhri}3{aMhri--skandha}
*m. OR {<a...part.of...the...foot...between...the...
angle...and...the...heel} <L.} MW000071
<H3>100{aMhri}3{aMhri--ziras} ; *n
<a...part.of...the...foot...between...the...angle...
the...heel} <L.} _ MW000072

<H1>599{aMh}1{aMh}2! {<to...press...togeth
...to...strangle...<conjecturable...from...Gk...
...Lat.}> {<A{angustus}> ; {<A{anxius}> ; {<
<L.} _ MW000073

<H2>100{aMhati}2{aMhati} ; *f. <anxiety...>
```

2015

2003

1996

1899

current

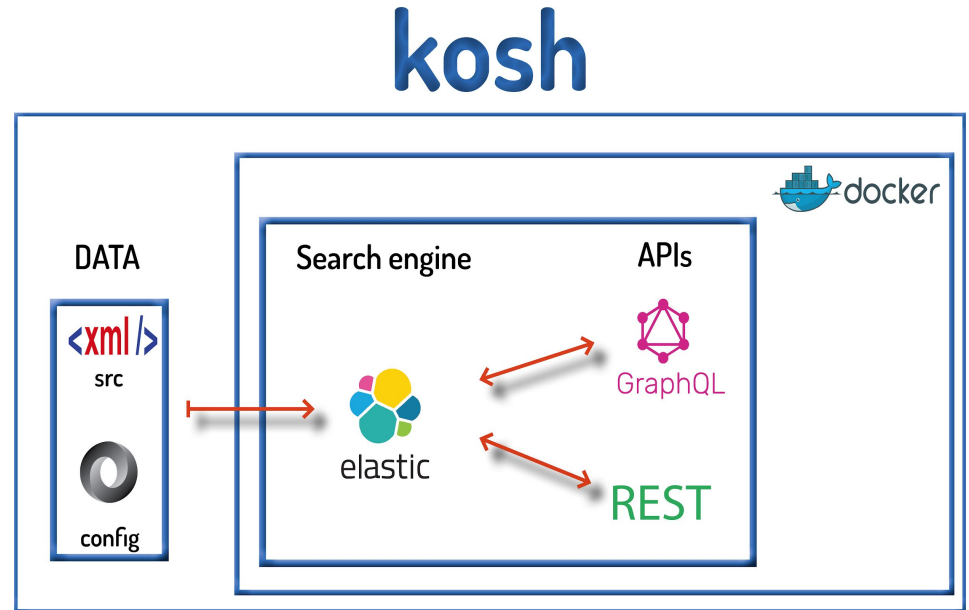


C-SALT APIs for Sanskrit Dictionaries

- APIs providing the most important Sanskrit dictionaries hosted at the University of Cologne
- 7 Dictionaries encoded in TEI-P5
- 2 APIs per dictionary: GraphQL and REST
- Employed in the [VedaWeb App](#)
- APIs are implemented with [Kosh](#)

Kosh - APIs for Dictionaries

- **Generic** framework for creating and maintaining APIs for dictionaries
- Publishers of lexical data:
 - Define the nodes to be indexed, and how
 - Control access levels



VedaWeb

- Research platform for Vedic texts
- Currently providing different versions of the **Rigveda**:
 - Oldest Indo-Aryan text, ca. 1300 / 1000 BC
 - ca. 160,000 words (10 books, 1028 hymns)
- Vedaweb allows its users to execute complex searches
- Data encoded in TEI-P5
- Data available through:
 - **Web app**
 - **REST API**

VedaWeb App

<https://vedaweb.uni-koeln.de/rigveda>

VedaWeb | Stanza 1.1.1 | H x +

vedaweb.uni-koeln.de/rigveda/view/index/0

VedaWeb beta
Rigveda online

All Text Versions v HK or stanza no. q ?

Accent-sensitive ?
Regex ?

Browse Rigveda

Toggle Content x

Hymn #: 1
Hymn addressee: Agni
Hymn group: Hymns of Madhucchandasa
Strata: N ?

Pada Labels ?
a: M, O
b: M, O
c: M, O

01 . 001 . 01 >

Text Versions

Lubotsky (Zurich) ?

a agnīm iḷe puróhitaḃ
b yajñásya devám ṛtvijam
c hótāraḃ ratnadhātamaḃ

Dictionaries

Lemma	Full Forms	Preview (Graßmann)	Entries (Graßmann)	Others
agní-	(agnīm)	agní,m., (1) das Feuer, als das bewegliche (aj...	#1	n/a
√id- ~ √iḷ-	(iḷe)	íd[neutr. des Deutestammes i] hebt den dur...	#1 #2	n/a
ṛtvíj-	(ṛtvijam)	ṛtv-íj,a., zur regelmässigen Zeit [ṛtú] opfern...	#1	n/a
devá-	(devám)	devá,a., m. (das f. deví siehe für sich), (1) a., ...	#1	n/a
puróhita-	(puróhitam)	puróhita,a., m. [ursprünglich Part. von dhā ...	#1	n/a
yajñá-	(yajñásya)	yajñá,m., bisweilen yajaná zu lesen, Götterv...	#1	n/a

All Text Versions

Lubotsky (Zurich)

Devanagari (Eichter)

Van Nooten & Holland

Aufrecht

Padapatha

Gunkel & Ryan

Lubotsky

All Translations

Griffith (EN)

MacDonell (EN)

Renou (FR) - n/a for this stanza

Geldner (DE)

Graßmann (DE) - n/a for this stanza

Otto (DE) - n/a for this stanza

Metrical Data

Morphological Glossing

Dictionaries

Summary

API development in DH projects **should be standard**, not a nice-to-have feature:

The **spectrum** of researchers that can access data **broadens** considerably

APIs are the **basis** of a digital **open-access culture**

Thanks!

Slides: <https://www.doi.org/10.5281/zenodo.3265782>

C-SALT: <http://c-salt.uni-koeln.de>

Kosh: <http://kosh.uni-koeln.de>

APIs for Sanskrit Dicts: https://cceh.github.io/c-salt_sanskrit_data

VedaWeb: <https://vedaweb.uni-koeln.de>