

# The Resource Publishing Pipeline of the Language Bank of Finland

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LANGUAGE BANK ACCESS CORPORA TOOLS ORGANIZATION SUPPORT

SUOMEKSI PÅ SVENSKA

#### Access



Apply for rights to use our language resources.

#### Corpora



Browse our corpora.

#### Tools



Try our tools.

#### Organization



Who are the Language Bank?

#### Support



Help and instructions.

www.kielipankki.fi

#### Search the Language Bank Portal:



Researcher of the Month: Filip Ginter

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# **Findable** Accessible **FAIR** data Interoperable Re-usable

## **Findable**

Consistent

metadata

Virtual Language
Observatory

PID

+ Access location **PID** 



Accessible

**DOWNLOAD** 









www.kielipankki.fi

## **FAIR** data



Language Bank Rights

Instructions for resource creators

HRT / VRT common formats

Interoperable

Common processing tools

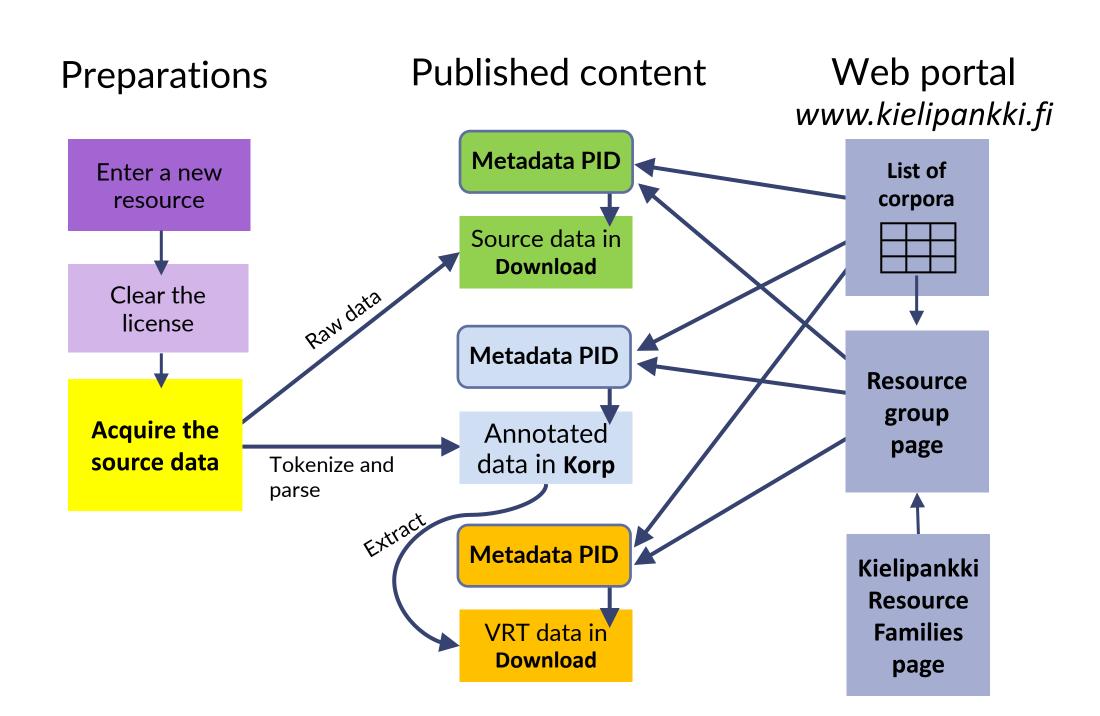


Deposition agreements

Support for versions and variants

Long-term archiving (?)

Re-usable





## Challenges

- Keeping resources consistent and interoperable
- Monitoring resource status during the publishing process
- Sharing tasks and knowledge within the team
- Making the workflow more efficient
- Enabling the data provider to take a more active role





Depositor submits resource details in an e-form

- Create a preliminary metadata record
- Request a citable PID for the resource
- Plan and distribute tasks required for publishing

- Please fill in all relevant parts of the form, even if the information provided is still preliminary.
- If necessary, the information you provide can be edited and completed together with FIN-CLARIN.
- Completing the form does not oblige you to conclude the deposition agreement, but the information may be of great help if you need further advice on your resource later.
- FIN-CLARIN may also contact you, or the responsible person you have indicated, to agree on follow-up measures concerning the resource.
- Once you have requested that we add the metadata of the language resource in the language resource catalogue, your resource can immediately gain more visibility, even if it is not yet ready for publication.
- FIN-CLARIN is happy to help you with any questions related to the deposition and distribution of the resource. You can reach us by sending email to fin-clarin (ATT) helsinki.fi

Other language resources to be published by Kielipankki (The Language Bank of Finland) of FIN-CLARIN

Contact details	
(*) Name of the information provider *	The e-form for describing a new resource
(*) Email address of the information provide	for the Language Bank of Finland
ORCID identifier of the information provide	r ( <u>instructions</u> )
What is ORCID?	
The home organization of the information provider, and the institution or department when appropriate; preferably also	

## Metadata









# Clear the License and Acquire Source Data

- Negotiate on the license for distributing the resource
- Check for copyrighted content
- Check for personal data
- Deposition license agreement
- Receive the source data, check and describe



# Clear the License and Acquire Source Data

- → Roles: Data depositor, Rightholder, Controller (for personal data)
- → Deposition license agreement template
- → End-user license template (+ license page template)
- → Template for resource-specific data protection terms and conditions
- → Language Bank Rights (LBR), to support CLARIN RES

## **CLARIN** License Categories



Publicly available



Available for academic, logged in users



Personal permission is required for access Language Bank Rights, https://lbr.csc.fi

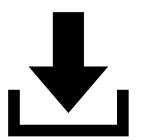


# Language Bank Rights

https://lbr.csc.fi

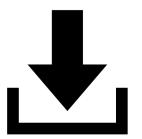
```
Based on REMS -
 Resource Entitlement
Management System (open source by CSC)
```





# Publish the Source Data in Download

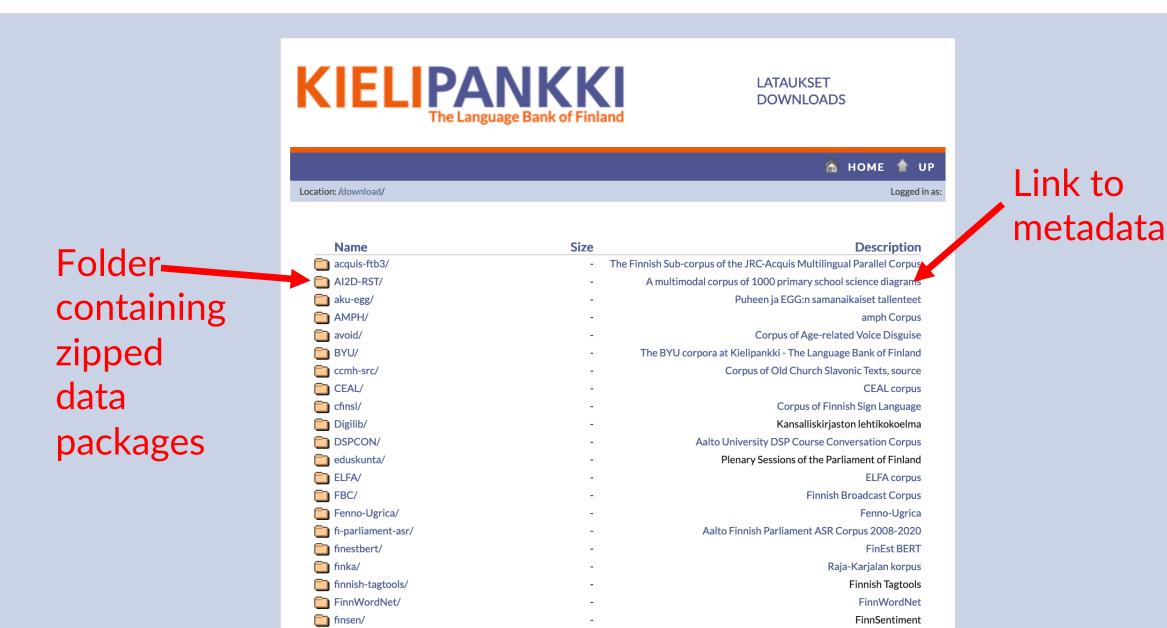
- Request a location PID
- Create README and LICENSE information files
- Package the data
- Create an LBR record (for RES licensed corpora)
- Upload the zip package(s) to the download service
- Publish a news item online



# Publish the Source Data in Download

- → PID generator
- → Language Bank Rights (LBR)
- → Access rights to the download server
- → Editor rights in the Portal

## Download Service, http://www.kielipankki.fi/download





# Publish the Data in Korp

- Preserve the structural features of the source data
- When possible, represent resource-specific additional properties as search criteria / filters
- Support links to media and/or external resources





25 of 275 corpora selected — 199.27M of 3.46G tokens

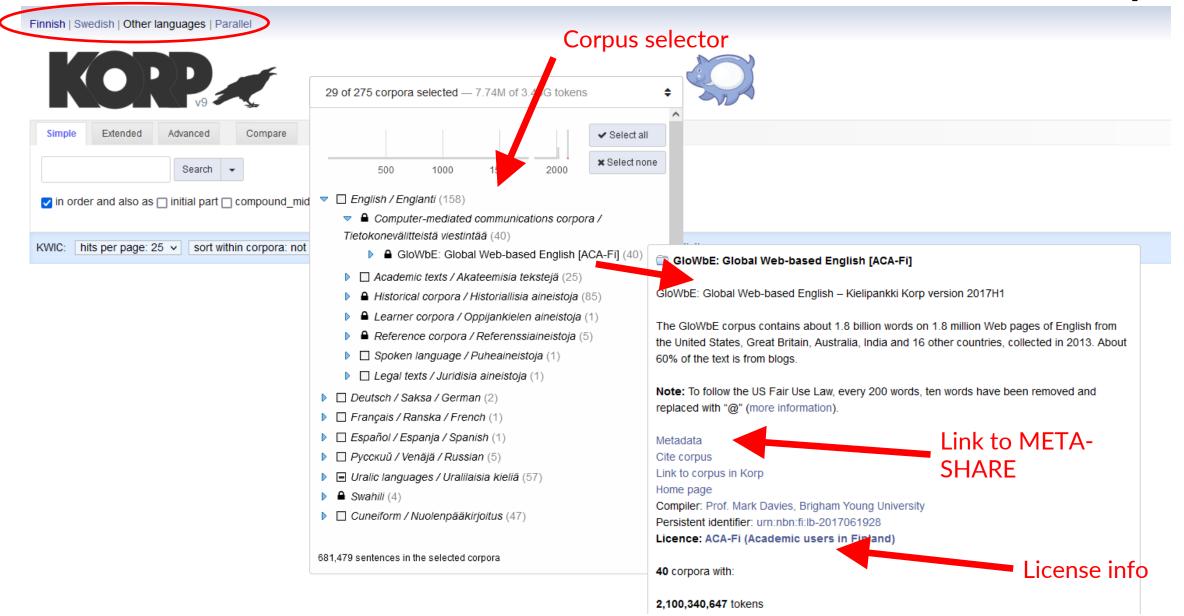


language..nn.1

Simple Extended Advanced Compare  language (noun) Search		
☑ in order and also as ☐ initial part ☐ compound_middle ☐ final part and ☐ case-insensitive	uage (noun)	
KWIC: hits per page: 25 - sort within corpora: not sorted - Statistics: compile based on: word - Show statistics	<b>9</b>	
KWIC Statistics		CORPUS
Results: 58,667   ( 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 ) » Go to page of 2347 Show context  E-THESIS: DOCTORAL DISSERTATIONS: AGRICULTURE AND FOR	RESTRY (does not current extended contaxt)	E-thesis: Doctoral dissertations: Agriculture and Forestry Subcorpus of: E-thesis (English)
alo Natural Resources Institute Finland ( LUKE ) FI-31600 Jokioinen, Finland ( Language revision: B.Sc. Michael Bailey Maininkitie 9 FI-02  Johannes Tiusanen has given to the content and language of the articles associated with this thesis.  I thank B.Sc. Michael Bailey for language revision of my thesis.  The research assistant spoke two of the local languages including Mòoré, which is spoken in approximatel A research assistant who understood and spoke the local language led the discussion on tree planting in the region.	320 Espoo, Finland Cover: Kati Lassi, Mikko Hautala, Mikko Hakojärvi	Metadata Cite corpus Link to corpus in Korp Persistent identifier: urn:nbn:fi:lb-2020031301 Licence: CC BY (CLARIN PUB)
esses interpersonal skills such as the ability to communicate in the three local languages used in the communities.  Helsinki, Finland Language revision:  Stephen Stalter Language Services PO Box  Emotion inferences from vocal expression correlate across languages and cultures.		TEXT ATTRIBUTES text_title: Challenges in real-time precision farming: a case study of modelling biomass accumulation
Is fermented milk products allowed the word yoghourt to enter in the common language (Baglio, 2014).  Ingi, Eeva Blomqvist - Vijendran and Peter Seenan are thanked for editing the language of publications and this summary.  Sakari Alasuutari Language revision:  Fourth, the entire data gathering was implemented and conducted in local languages, which were the native languages of the interview.	vers, collaboration partners and company managers, but were translated into English afterwa	keywords: agroteknologia faculty: University of Helsinki, Faculty of Agriculture and Forestry, Department of Agricultural Sciences, Agrotechnology
g was implemented and conducted in local languages, which were the native <b>languages</b> of the interviewers, collaboration partners and co were translated into English afterwards to avoid possible problems caused by <b>language</b> barriers.  I warmly thank MMT James Thompson for careful <b>language</b> editing, Birgitta Åhman for accepting the duty of controls.	mpany managers, but were translated into English afterwards to avoid possible problems cau	subject: [empty] thesis type: Doctoral dissertation (article-based)
A language and environment for statistical computing.  menting on this Thesis, and also Stephen Skate for his revision of the English language.  As often when doing sensory research, translations between languages may be challenging (Andani et al.  ISSN 2242 - 119X (Print) ISSN 2242 - 1203 (Online) Date September 2015 Language English Pages 101 p. + app. 41 p.		WORD ATTRIBUTES base form: language baseform (compound boundaries): language part of speech: noun
pecial thanks also to Stella Thompson, University of Helsinki, for revising the language of this dissertation.  Economics of Forestry (1902) - apparently the first on the subject in English language - that he was fully aware of the German tradition in dloss, business partnership, and even of the taking of interest in their native language (Poitras 2000).  Immercial arithmetic tables Tau became common also in other countries and languages.	in forest economics.	msd: Number=Sing dependency relation: compound Show Dependency Tree Download from E-thesis
The first compound interest tables in the English language were by William Colson (1612) whose book con-	tained tables of Too at ten percent per annum, for T	Download HOTH E-thesis

## Resources grouped after languages

## Resource metadata in Korp



n yndessa vaition ja seutujen kuntien kanssa piiottionjeima **maananmuuttajien** kotouttamisen ja tyoilistymisen edistamiseksi.

Samoin on koko yhteiskunnan etu myös että maahanmuuttajat työllistyvät mahdollisimman hyvin ja saavat tarvitsemansa Sinne tuli sekä paikallisia että näitä maahanmuuttajia pienen ajan päästä tuli valtavasti kumpienkin vanhempia

eskeisessä asemassa ja tiedämm ksi olisivat kuin vuokratyöyrityksiä uomen kielen opetusta on tarjolla j n aikaan meillä sanotaan että maa pelkotiloja espoolaisissa todeten e

ssa eduskunta edellytti hallitusta i

97.\_torstaina\_23.\_lokakuuta\_2008.mp4



Alkuaika: 10:00 Loppuaika: 10:12

Puhunnos: Sitten äskettäin Espoossa pidetyssä vaalitilaisuudessa ministeri Väyrynen nostatti pelkotiloja espoolaisissa todeten että metro tuo kaupunkiin maahanmuuttajia .

puhujan rooli: [tyhjä] enen

Saksa

ille et

puol

puheenvuoron tyyppi: [tyhjä]

Sosialide mokraattiner 1.11

puhuja: Maria Guzenina-Richardson

eduskuntaryhmä:

eduskuntaryhmä

puhunnoksen numero: 17661

puhunnoksen alkuaika (ms): 600928

puhunnoksen kesto (ms): 11357

puhunnoksen loppuaika (ms): 612285

istunnon kesto: 2:49:38,760

puhunnoksen alkuaika: 0:10:00,928

puhunnoksen loppuaika: 0:10:12,285

puhunnoksen kesto: 0:00:11,357

#### SANAN PIIRTEET

perusmuoto: maahanmuuttaja perusmuoto (yhdyssanarajat):

maahanmuuttaja

sanaluokka: substantiivi

morfologinen analyysi: NUM\_PII

CASE\_Par

dependenssisuhde: suora objekti sanan sijainti nimessä: ulkopuolella

Näytä dependenssipuu

Näytä video Korpissa

Näytä video erillisellä sivulla

7.10.2022



# Publish the Data in Korp

- Converting source data to simple XML (HRT)
- Tokenizing the data
- Parsing the data
- Inserting annotations
- Creating the corpus package for Korp
- Creating the corpus configuration for Korp
- Publishing a news item in Korp and in the Portal

# Simple XML (HRT)

```
<text title="Elias Lönnrot &gt; Frans Johan Rabbe" author="Elias Lönnrot" lang="swe" datefrom="18510303" dateto="18510303">
<paragraph>Kajaani
</paragraph>
<paragraph>3.3.1851
                                                                                 structural attributes
/paragraph>
<paragraph>Käre Broder!
/paragraph>
<paragraph>Tack för katetrarne, som jag med posten erhöll. Med Öhmanska honorarii anbudet är jag mycket belåten och skall vid tillf
insända andra uppsattser. Affären om qvarliggande boklagret i öhmanska bokhandeln ber jag Dig afgöra efter eget godtfinnande
och de uppgifter, Du af nämnde Bokhandel erhåller, ty jag litar på att de äro riktiga och är nöjd med hvad som erbjudes.
Mycket smärtande för mig var Fab. Collans dödsfall, ty efter min
</paragraph>
<paragraph>öfvertygelse var han en i alla afseenden braf karl, och det finns ondt om sådana.
</paragraph>
<paragraph>Jag hade besluit att med våra prester fara idag till Idensalmi för att gratulera nya Bispen, men en Ingenieur Kyanders
som ligger på sistone i Hydroc phalus acutus hindrar mig att resa.
/paragraph>
<paragraph>Dessa rader afsänder jag med min brorsson Frans, som nu i rappet afreser till Hfors för att studera, och hvilken jag på
bästa får hos Dig rekommendera. Måtte han kondra varskoddare, än många andra i dessa kritiska tider!
</paragraph>
<paragraph>Kajana den
/paragraph>
                                                      plain text inside paragraph tags
<paragraph>3 Mars 1851
/paragraph>
<paragraph>Tuus
</paragraph>
```

<paragraph>Elias Lönnrot.

</paragraph>



# Publish the Data in Korp

- → Tailor-made scripts regarding format and structure of the source data
- → Common tokenizer
- → Common parser
- → Additional tools, e.g., language identifier
- → Common script 'korp-make'
- → Manual additions to the existing Korp configuration
- → Access rights to the Korp server (within the team)
- → Access rights to the portal



# Publish the VRT Data in Download

- Extract VRT from Korp
- Request location PID
- Create README and LICENSE information files
- Package the data
- Create an LBR record (for a RES corpus)
- Upload the zip package(s) to the download service
- Publish a news item



# Publish the VRT Data in Download

- → Access rights to the Korp server
- → Tool for extracting VRT from Korp
- → PID generator
- → Language Bank Rights (LBR)
- → Access rights to the download server
- → Editor rights in the portal

## positional attributes

## VRT format, extracted from Korp

```
<!-- #vrt positional-attributes: word ref lemma/ pos msd dephead deprel wid spaces lex/ -->
<!-- #vrt info: VRT generated from CWB data for corpus "nlfcl_sv" (2022-03-02 14:25:00
<!-- #vrt info: A processing log at the end of file -->
<text id="1" author="" contributor="Hertzberg, Rafael" title="Gustaf Adolfs minne i Finland" year="1894"</pre>
lang="swe" datefrom="18940101" dateto="18941231" timefrom="000000" timeto="235959" natlibfi="Klassikkokirjasto,
rights="" digitized="2017-04-20" filename="KlK_with_timestamps.xml" urn="URN:NBN:fi-fd2010-00000511" pdflink="|1
html url="http://www.doria.fi/handle/10024/100731" publisher="Helsingfors: [s.n.], 1894" license="Public Domain
<page n="1">
                                    structural elements
<paragraph id="1">
≺sentence id="1" ★
GUSTAF 1
                GUSTAF
                                PΜ
                                        PM.NOM
                                                        ROOT
                                                                                 |GUSTAF..pm.1|
                                                0
                |II|
                                RG.NOM
II
                        RG
                                                EΤ
                                                                         |II..rg.1|
                ADOLF
                                                                SpaceAfter=No | ADOLF..pm.1|
ADOLF
                                PM. NOM
                                                HD
                                                IΡ
                                                                SpacesAfter=\s\s\s
                        MAD
                                MAD
                                                                                         |...xx.1|
</sentence>
<sentence id="2">
                |Efter| PP
                                PP
                                                ROOT
                                                                SpacesAfter=\s\s\s
                                                                                         Efter..pp.1
Efter
                                                                                         |den..al.1|en..al.1|
                |den|en|
                                DΤ
                                        DT.NEU.SIN.IND
ett
kopparstick
                        kopparstick
                                                NN.NEU.SIN.IND.NOM
                                                                                 PΑ
                                                                                                 SpacesAfter=\s\s
                af
                                PP
                                                EΤ
                                                                         af..pp.1
af
                IM.
                                PM.NOM
                                                PΑ
                                                                         M...pm.1
                |J.|
                        PM
                                PM.NOM
                                                HD
                                                                         |J...pm.1|
                        Miereveld
                                                PM. NOM
Miereveld
                                                                                 SpaceAfter=No
                                                                                                 |Miereveld..pm.:
                1.1
                        MAD
                                                IΡ
                                                                SpacesAfter=\n\n
                                                                                         |...xx.1|
                                MAD
```

### corpus short name

## Check List of Tasks



### ylenews-fi-2019-2021: Publish VRT data in Download

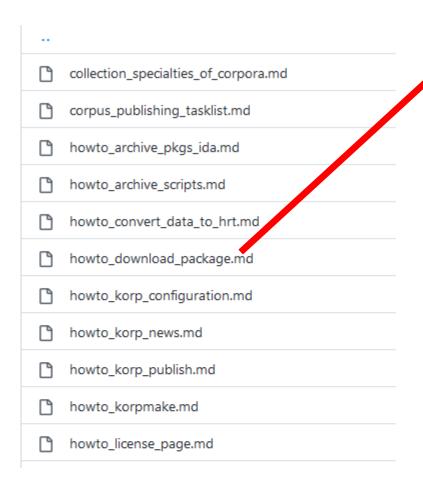
- 1. [x] +D Get the data from IDA or extract it from Korp
- 2. [x] +A Create a META-SHARE record instructions for creating metadata records
- 3. [x] +A Request URNs (for META-SHARE, download, license pages)
- 4. [x] +A Add the corpus to list of upcoming resources
- 5. [x] +A Create/update license pages how to create/update license pages
- 6. [x] +A Add citation information to the META-SHARE record
- 7. [x] +D Create a download package

- **check boxes**<sub>1. [x] +**D** Create and add the downloadable readme and license files how to create/update license pages</sub>
  - 2. [x] +D Zip the data and the readme and license files
  - 3. [x] +D Compute MD5 checksum for the zip package
  - 8. [x] +D Add the download package, MD5 checksum file and readme and license files to the directory /scratch/clarin/download preview on Puhti
  - 9. [] +T Have the package tested
  - 10. [] +D Upload the package to the download service (or ask someone with the rights to do that)
  - 11. [-] ?A Create an LBR record (for a RES corpus, if the corpus does not yet have one)
  - 12. [] + T Have it tested again (access rights!)
  - 13. [] +A Move the corpus from the list of upcoming resources to the list of published resources
  - 14. [] +A Update the META-SHARE record; add location PIDand Availability start date (under Distribution)
  - 15. [] ?A Update the META-SHARE record: add relations to previous or parallel versions/variants of the corpus
  - 16. [] +A Create or update the resource group page

### links to documentation modules

## Modular and Shared Documentation

https://github.com/CSCfi/Kielipankki-utilities/tree/master/docs



### Publish source data/VRT data in Download

ource data of a resource as well as its VRT version can be offered in the download service of Kielipankki http://www.kielipankki.fi/download.

The **source data** is offered as is, meaning that usually it is not changed by us, except for packaging the data (in zip files) in a suitable way. All data should be available in IDA, so it can be taken from there to create a download package.

If the VRT data is not yet stored in IDA, it can be extracted from Korp in order to the Korp access rights to the Korp server for this.

As for all resources and all their versions, a META-SHARE record to be created, URNs to be requested, the resource has to be added to the list of upcoming resources, if not there yet. (See instructions)

The name of the source version of a resource should contain the additional information 'source', e.g. Yle Finnish News Archive 2011-2018, source . The short name should have the suffix '-src', e.g. ylenews-fi-2011-2018-src .

Accordingly, the name of the VRT version of a resource should contain the information 'VRT', e.g. Yle Finnish News 102011-2018, VRT . The short name should have the suffix '-vrt', e.g. ylenews-fi-2011-2018-vrt . Please follow Kielipankki's Language resource naming conventions.

In case of data with restricted access rights, license pages in the portal have to be created and linked to from META-SHARE. Citation information also has to be added to the META-SHARE record.

#### Creating the download package

Download the data from IDA to your work directory on CSC's computing environment (Puhti) in a separate folder.

Create a README.txt containing at least the following information: long name of the corpus, shortname, metadata PID, license information, short description of the corpus as given in META-SHARE, link to the resource group page. Add an explanation of the structure of the download package if needed.

Create a LICENSE.txt, if the access to the resource is restricted. The text of this file should be taken from the respective license page in the portal.

# Testing: Quality control

- the final part of the pipeline
- another team member checks the resource before it is published

# https://www.kielipankki.fi/corpora

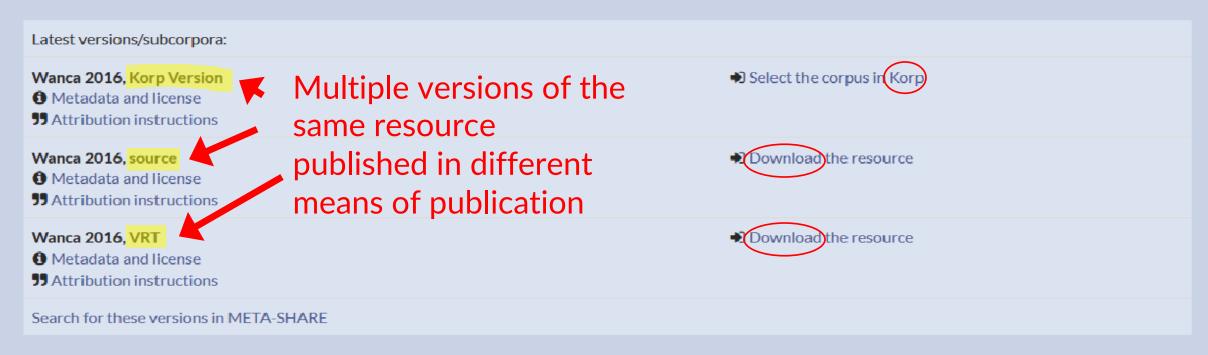
					Etsi:		
Abbreviation	◆ Name and metadata	<b>♦</b> License	Apply	Location \$	Service level \$	Help \$	Cite \$
acquis-ftb3	The Finnish Sub-corpus of the JRC-Acquis Multilingual Parallel Corpus link to metada	taub		Korp	В	0	99
acquis-ftb3-dl	Finnish Sub-corpus of the JRC-Acquis Multilingual Parallel Corpus, Downloadable Version	PUB		Download	В	0	99
agricola-v1-1-korp	The Morpho-Syntactic Database of Mikael Agricola's Works version 1.1, kink to license	PUB		Korp	В	0	99
ai2d-rst-v1-1	AI2D-RST: A multimodal corpus of 1000 primary school science diagrams version 1.1	PUB		Download	В	0	99
aku-egg-dl	Speech and EGG (Electroglottography) Simultaneous Recordings, downloadable version	ACA		Download	В	0	99
amph	amph-Corpus link to location	ACA	•)	Download	В	0	99
ArkiSyn-korp	ArkiSyn Database of Finnish Conversational Discourse, Helsinki Korp Version	PUB		Korp	В	0	99
AVOID	Corpus of Age-related Voice Disguise (AVOID) link to resource group page	RES	*)	Download	В	0	99
BeserCorp	The Corpus of Beserman Udmurt	PUB		Korp	В	0	99
ccmh-src	Corpus Cyrillo-Methodianum Helsingiense: Corpus of Old Church Slavonic Texts, source  Citation instructions	PUB		Download	В	0	99
ceal-dl	The Downloadable Version of Classics of English and American Literature in Finnish	RES		Download	Α	0	99
ceal-o	Classics of English and American Literature in Finnish, Sentences and Paragraphs in the Original Order	RES	•	Korp	Α	0	99
ceal-par-korp 7.10.2022	Classics of English and American Literature as translated by Kersti Juva, English-Finnish parallel corpus, Korp WWW.kielipankki.fi	RES		Korp	А	0	30
coal-par-c-dl	The Downloadable Version of Classics of English and American Literature as translated by Kersti Juva, English-Finnish parallel	ACA		Download		0	99

# Resource group page

### Wanca 2016

Wanca 2016 is a collection of web corpora in small Uralic languages. The collection is composed of 29 sentence corpora in different languages. The corpora have been collected from the Internet using the automated system developed in the Finno-Ugric Languages and the Internet project (SUKI) supported by the Kone foundation from their Language Programme 2012-2016. The sentences have been extracted from the pages found while harvesting with Heritrix and the language of each sentence has been identified with MultiLi using HeLI as the identification method. Each sentence has a link to the original page it was found in, but it is possible that some of the links stop working. In that case we recommend searching for the page in the Internet Archive Wayback machine https://archive.org/web/.

More information on Wanca: http://www.suki.ling.helsinki.fi/wanca



Of this language corpus different versions/subcorpora are published in the Language Bank of Finland. The versions are available through the Language Bank Download Service and/or through the Korp concordance tool. The links to the different versions can be found from the list above.

## Kielipankki Resource Families

Corpora

Computer-mediated communication corpora

o Corpus of Global Web-Based English

- Finnish conversational chat corpus
- FinnSentiment
- SFNET Corpus
- o Suomi 24
- TallVocabL2Fi: Measurements of 15 L2 Finnish le
- The HS.fi News and Comments Corpus
- Ylilauta Corpus
- · Corpora of academic texts
  - UH's E-thesis corpus
- Easy-to-read corpora (or corpora containing easy-to-re
  - Corpus of Finnish Magazines and Newspapers fro
  - Yle News Archive
- Historical corpora
  - Alexis Kivi Corpus (SKS) [multilingual corpus]
  - Classics Library of the National Library of Finland
  - Classics of Finnish Literature, Kielipankki version

Tools

Language identification

HeLI-OTS

- · Named entity recognition
  - Finnish Tagtools
- Machine learning
  - FinBERT
- · Part-of-speech tagging and ler
  - Finnish Tagtools
  - Turku-neural-parser pip
  - Sparv
- · Tools for sentiment analysis
  - Ftuma Customer Feedba
  - finsentiment
- Tools for speech analysis and a
  - Aalto University Automa
  - ELAN
  - o Praat

link to the resource group page

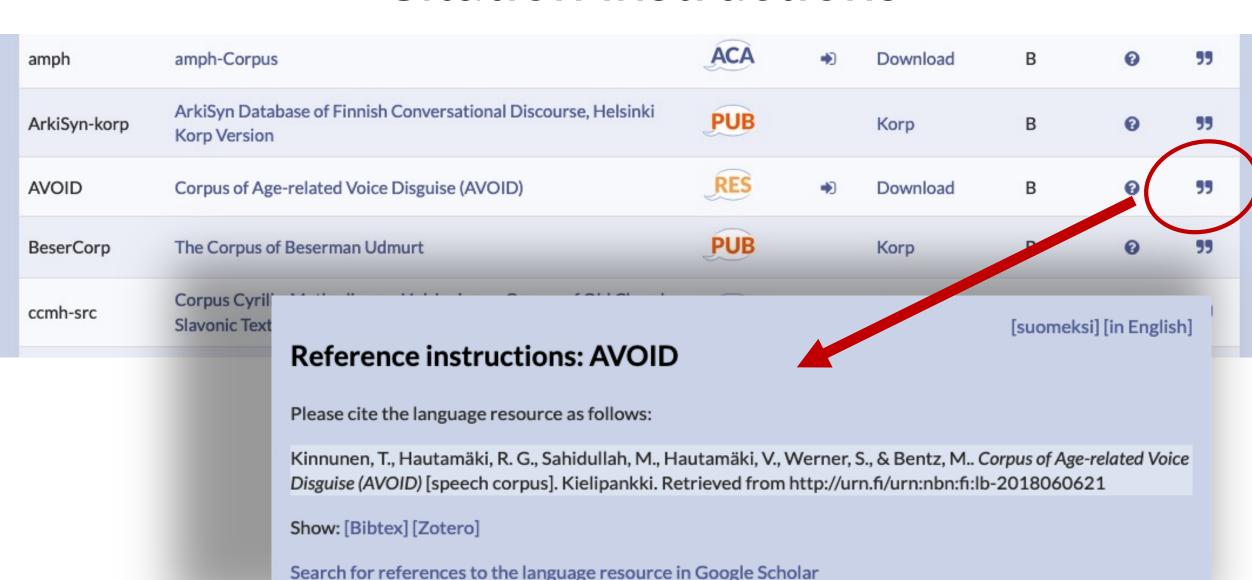
of a resource or tool

Web Services

· Data Set Location and Access

- o Digital collections from the National Library of Finland
- o Digital collections of Kotus, the Institute of the Languages of Finland
- Download service Kielipankki
- Giellatekno
- o Language Bank Rights Kielipankki
- o META-SHARE Kielipankki
- OPUS Helsinki
- Virtual Language Observatory CLARIN
- · Interactive Content Search and Visualization
  - CLARIN Federated Content Search
  - Korp
  - Lääketutka
  - Texthammer
  - o Text reuse in the Swedish-language press, 1645-1918
- Interactive Lexical Platforms
  - ANEE lexical portal of Akkadian
  - Proto-Indo-European Lexicon
  - Sanat
  - Signbank

## Citation instructions



## https://www.kielipankki.fi/news/

LANGUAGE BANK ACCESS CORPORA TOOLS ORGANIZATION SUPPORT

SUOMEKSI

PÅ SVENSKA

### News

### New resource: Open Richly Annotated Cuneiform Corpus, Korp Version, June 2021

12.9.2022

New resource: Open Richly Annotated Cuneiform Corpus, Korp Version, June 2021 Oracc 2021 (Open Richly Annotated Cuneiform Corpus, Korp Version, June 2021) is now available in Korp alongside Oracc 2019. [...]

### New resource: Finnish conversational chat corpus, source

6.9.2022

New resource: Finnish conversational chat corpus, source Finnish conversational chat corpus, source is available at the download service at Kielipankki. More information can be found on the resource group page.

#### Researcher of the Month: Mikko Laitinen

5.9.2022

Researcher of the Month: Mikko Laitinen Photo: Olli Laitinen Kielipankki - The Language Bank of Finland is a service for researchers using language resources. Mikko Laitinen tells us about his [...]

#### Search the Language







#### Subscribe to the no







Kielipankin kuukaude Laitinen, joka kertoo viimeaikaisesta työst parissa. Lyhyet tviitit rikkaaseen metadata uudenlaisen ikkunan https://www.kielipank

#UEF #korpus #FING #tutkimus #aineisto # #digihum

tutkija-mikko-laiti.../



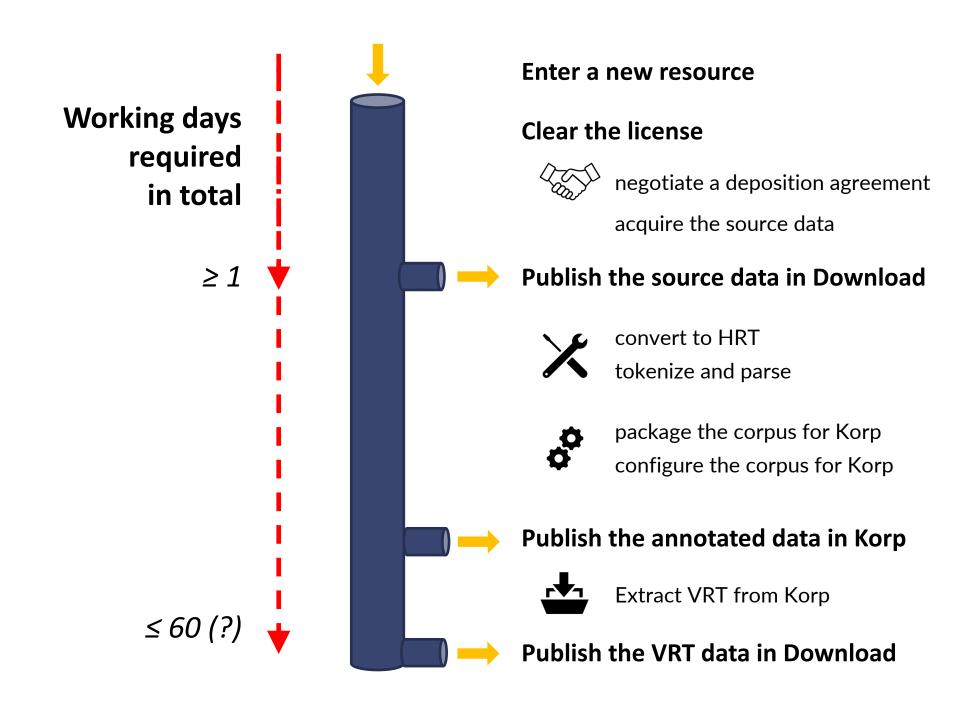
## Active Role in Publishing a Resource?

## PROS:

- A wide range of resources can be offered (including RES and even very large data sets)
- Clear licenses clear responsibilities
- Consistent metadata
- Support for individual features in source data
- Consistent, transparent and interoperable data

## **CONS:**

- Workload
- Publication delay





## Conclusions

- The shared check list helps in monitoring the publishing process.
- The modular documentation and shared scripts ensure consistent processing within the team.
- Increased automatization and publicly available documentation can enable the content depositors to participate more actively.
- It is necessary to compare and to share good practices with other CLARIN centres.





Thank you!