Continuous Annotation Quality Control, Support for Hierarchically Structured Label Sets and Long-Segment Annotation with WAT-SL 2.0
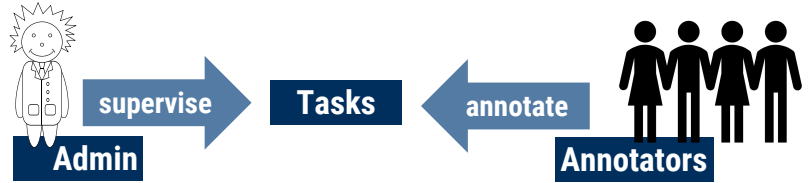
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Webis

Web Annotation Tool for Segment Labeling – Basic Design

- **Annotation of long text segments**
- **Web-based front-end with Java back-end**

Admin → supervise → Tasks ← annotate ← Annotators

Four easy setup steps
1. **Selection of TXT files**
2. **Definition of annotation categories**
3. **Configuration of annotator accounts**
4. **Tuning colors of annotated categories**

Task	Progress	Last update
task-01	21/21 segments	2019-07-16 15:49
task-02	0/64 segments	-
task-03	7/26 segments	2019-07-22 14:50

Novel Features in WAT-SL 2.0

Annotation Monitoring & Quality Control

- **Overview of task and segment completion**
- **Admin can login as any annotator**
- **Monitoring time spent on each task**
- **Computing IAA values (Krippendorff's α)**

Annotator	Tasks		Segments		Time	Login (new window)
Alice Carroll (alice)	2/6	33%	90/164	55%	0:07:39	Login as Alice Carroll
Bob Builder (bob)	1/6	17%	21/164	13%	0:02:17	Login as Bob Builder
Charlie Brown (charlie)	6/6	100%	164/164	100%	0:12:04	Login as Charlie Brown

Annotator: Alice Carroll (alice)

Task	Segments		Time
task-01	0/21	(0.0%)	--
task-02	64/64	(100.0%)	0:05:45
task-03	26/26	(100.0%)	0:01:54

Annotator: Bob Builder (bob)

Task	Segments		Time
task-01	21/21	(100.0%)	0:02:17
task-02	0/64	(0.0%)	--
task-03	0/26	(0.0%)	--

Task	Segments		Annotators		Kripp. Alpha
task-01	168/168	(100.0%)	8/8	(100.0%)	0.928
task-02	450/512	(88.0%)	7/8	(88.0%)	n.n.
task-03	208/208	(100.0%)	8/8	(100.0%)	1.0

Annotation Usability

- **Hierachically structured labels**
- **Keyboard shortcuts**

preamble
anamnesis
diagnostics
medication
therapy
future
appendix

anamnesis
patient anamnesis
family anamnesis

Export formats

- **CSV files**
- **ANN files (BRAT-compatible)**

➔ **Download WAT-SL 2.0 with example annotation data**
https://github.com/webis-de/wat

Clinical Annotation Project

- **1K German clinical documents**
- **170K Text segments**
- **8 Medical students**
- **2 Annotation supervisors**
- **4 Annoatation iterations**
- **6-21 Labels per round**
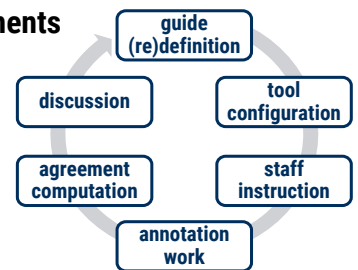
➔ **Based on feedback from annotators WAT-SL 2.0 was implemented**

guide (re)definition → tool configuration → staff instruction → annotation work → agreement computation → discussion → guide (re)definition

Iter.	Doc.	Lab.	min / Doc.	Vers.
1	240	6	7:45	1.0
2	400	7	7:47	1.0
3	392	21	9:17	1.0
4	400	19	4:46	2.0
Final	1406	18	3:16	2.0

➔ **Read more: Lohr et al.:** *CDA-Compliant Section Annotation of German-Language Discharge Summaries*: **Guideline Development, Annotation Campaign, Section Classification.** In: AMIA Annual Symposium Proceedings 2018

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