Assumption-Based Argumentation Translated to Argumentation Frameworks
ICCMA 2017 Benchmark Description

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This benchmark set consists of 426 instances, i.e., argumentation frameworks (AFs) [3] in apx format, obtained from translating instances from assumption-based argumentation (ABA) [1] to AFs.

The ABA benchmark is detailed in [2] and contains 680 ABA frameworks generated via a random generation model with several parameters. In particular, the ABA benchmark set includes cyclic and acyclic ABA frameworks. We translated the ABA frameworks to AFs such that reasoning tasks on ABA frameworks can be carried out on the produced AF instances. The translation is presented in [4]. After filtering, including enforcing a time-out on the generation, and restricting to AFs with at most 1500 arguments, this procedure resulted in 426 AFs, among these 236 generated from acyclic ABA frameworks and 190 from cyclic ABA frameworks. The number of arguments in the obtained AF instances range from 15 to 1449 arguments, many of them with a dense attack graph. File names state the parameters used for generation of the original ABA: afinput_exp[acyclic|cycles]_[depvary|indvaryV]_stepS_batch_yyyBB indicating presence of cycles, size and to which series the instance belongs (step S and depvary or indvaryV with V ∈ {1, 2, 3} see [2, Table 11]), and a batch identifier.

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References

³ For our benchmark submission to ICCMA’17, we did not include the ten queries per ABA framework that come with the ABA benchmark.