

Prodigy project: Work packages

	Year 1				Year 2				Year 3			
Month	1-3	-6	-9	-12	-15	-18	-21	-24	-27	-30	-33	-36
Data creation	WP 3		WP 4									
	WP 1											
Building generators	WP 2		WP 5		WP 8			WP 11				
Representation			WP 7									
Probabilistic control					WP 10							
Evaluation			WP 6				WP 9				WP 12	
Software												WP 13

WP 1 Adapt ILEX and BabyTalk corpora of paired inputs/outputs for data-to-text NLG (see Case for Support, Section 2.2).

Deliverables: ILEX and BabyTalk corpora, adapted for Prodigy purposes.

WP 2 Build baseline generators for ILEX and BabyTalk corpora. Train using *p*CRU techniques, generate output texts for test set inputs.

Deliverables: domain-specific *p*CRU baseline generators for ILEX, BabyTalk; sets of test set outputs.

WP 3 (PI) Create Prodigy Recipes corpus: harvest large collection of recipes from web; sort into recipe types and tidy up. Develop method for automatically extracting an input representation from recipe texts and list of ingredients (see Section 2.2); incorporate resulting input content representations into corpus.

Deliverable: Prodigy Recipes corpus of paired inputs and output sets.

WP 4 (PI) Create Prodigy Census corpus: extract statistics from census, design interactive website for paraphrasing task, recruit, train and supervise subjects in paraphrasing task. Combine census statistics and paraphrases into corpus (see Section 2.2).

Deliverable: Prodigy Census corpus of paired inputs and output sets.

WP 5 Build baseline generators for Prodigy Recipes and Prodigy Census corpora. Train using *p*CRU techniques, generate output texts for test set inputs.

Deliverables: domain-specific *p*CRU baseline generators for Prodigy Recipes and Prodigy Census corpora; sets of test set outputs.

WP 6 Evaluation I: using automatic and human-based methods (see Section 2.5), evaluate test set outputs for all five *p*CRU baseline generators (including the existing SUMTIME generator), and outputs from corresponding existing hand-crafted generators. This will take longer in the first round than the second and third, because of evaluation infrastructure creation (websites, questionnaires, experimental design, etc.).

WP 7 Create content representation formalism for inputs to data-to-text NLG that is sharable between all Prodigy domains, conducting overview of relevant existing methods and consulting panel of advisors (see Section 2.3).

Deliverable: Prodigy input representation formalism.

WP 8 Reimplement *p*CRU generators for SUMTIME, ILEX, BabyTalk, Prodigy Recipes and Prodigy Census, this time using new input representation formalism, and encoding generation spaces with maximal overlap; generate test set outputs.

Deliverables: five generators using same domain-independent input representation formalism for the five domains; sets of test set outputs.

WP 9 Evaluation II: as Evaluation I, for new test set outputs.

WP 10 Investigate alternative techniques for training and using probabilistic model; investigate alternative probabilistic models, and correspondingly different ways of encoding generation spaces; continuously test on the five Prodigy corpora, assessing progress with automatic evaluation.

Deliverables: final set of best performing techniques for probabilistic modelling for NLG, alpha version of Prodigy software package for building probabilistic generators.

WP 11 Reimplement SUMTIME, ILEX, BabyTalk, Prodigy Recipes and Prodigy Census generators using final technology.

Deliverables: final generators for the five Prodigy domains.

WP 12 Evaluation III: final evaluation of Prodigy software and Prodigy generators, using human-based evaluation of output quality and task-based evaluation.

WP 13 (PI) Final testing of Prodigy software and corpora, packaging and release.

Deliverables: final versions of Prodigy Recipes and Prodigy Census corpora, and of Prodigy software for building probabilistic NLG systems, for release to researchers, under appropriate non-commercial use license.