

The ICICLE Project: An Overview

Interactive Computer Identification and Correction of Language Errors

Our Goal: Design & Build an Intelligent Written English Tutoring System for Deaf Students

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Motivation

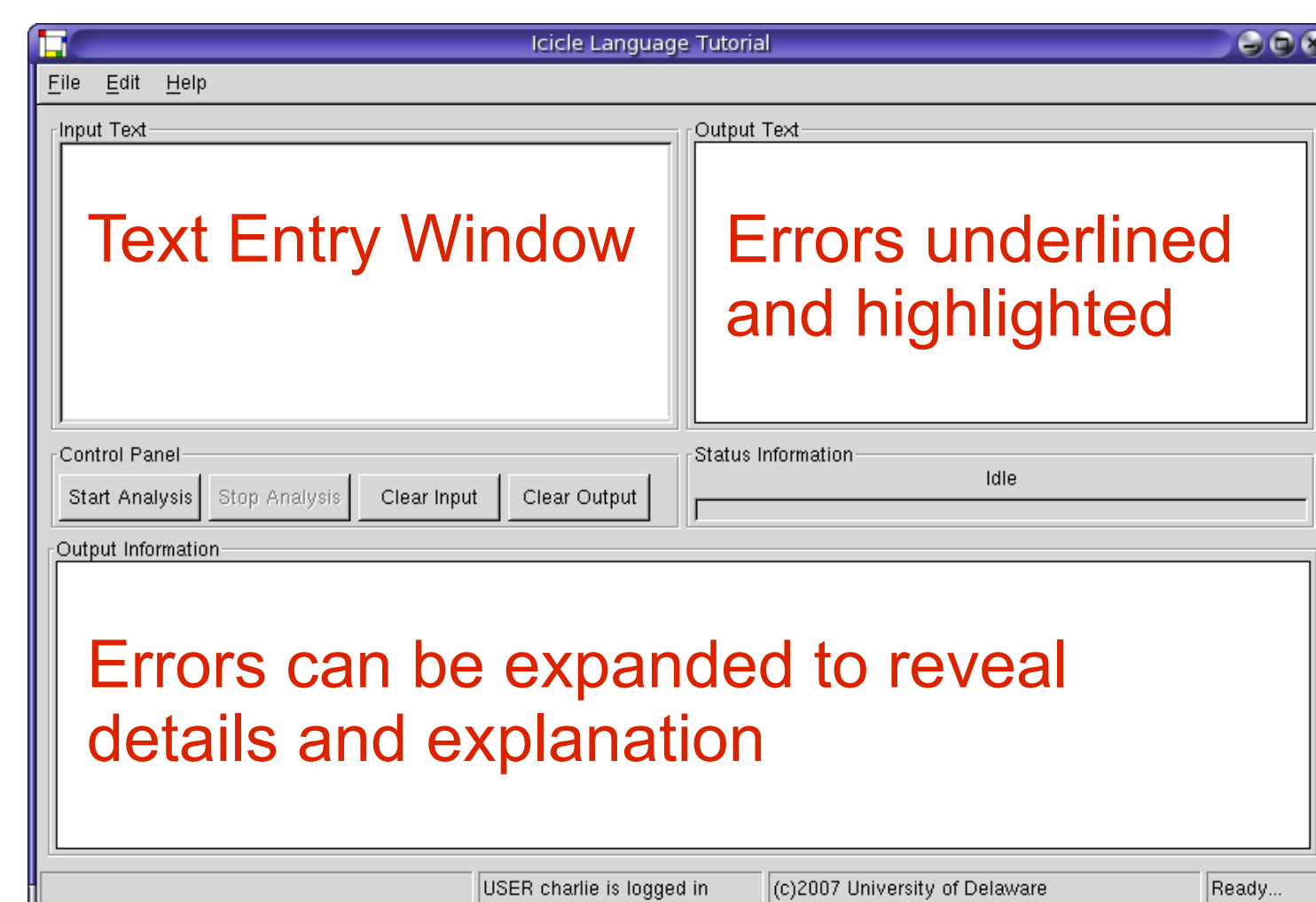
- ▶ An intelligent tutoring system to tutor deaf users on grammatical principles of written English
- ▶ Intended as "Intelligent Grammar Checker and Coach"
- ▶ English is distinct from American Sign Language (ASL)

Our Intuition

- ▶ Native/near-native users of ASL make many similar mistakes when learning to communicate in English
- ▶ We can apply Natural Language Processing tools and methods to identify these common errors and provide appropriate feedback to correct user mistakes
- ▶ The desired result is an interactive tutoring environment that will help deaf students identify grammatical errors and accelerate their acquisition of written English

User Interface

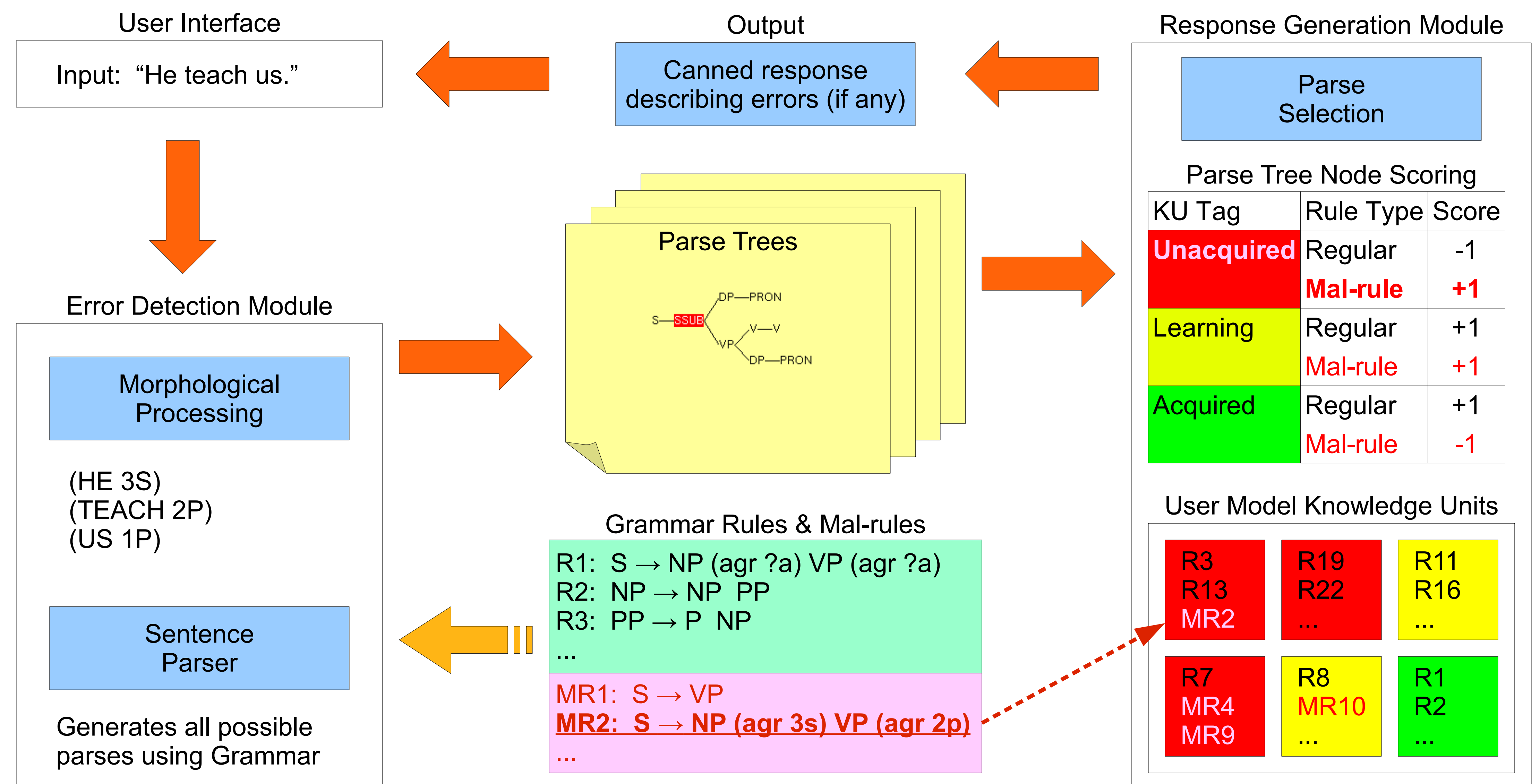
- ▶ Cycle of user input and system response:
 - ▶ User submits writing to system
 - ▶ System performs grammatical analysis of text
 - ▶ System responds with feedback
 - ▶ User makes appropriate corrective actions



Future Work

- ▶ Provide custom feedback tailored to specific user model
- ▶ Explore user history to obtain detailed information about what knowledge the student has already mastered

Parsing a Sentence & Identifying Errors



Sample Output

