Tool for Tree generation and display of PLIL (Pseudo Lingua for Indian Languages)

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Introduction:

Using this tool user can get the pictorial representation of syntactic and semantic tree of any English sentence. It is basically a sub-component associated with the English text analyser for viewing the complicated bracketed structure of syntax and semantic association of words in the sentence. This system can be used as a Computer Assistant Tool for Language Learning.

Instead of designing translators for English to each Indian language, AnglaBharati uses pseudo-interlingua approach. It analyses English sentences only once and creates an intermediate structure, called PLIL (Pseudo Lingua for Indian Languages), with most of the disambiguation performed. This structure has the word and word-group order as per structure of the target language and also depicting the sentence type (like affirmative, imperative etc.) of the given input sentence. PLIL of a input sentence is defined in terms of NP, VP and other constructs as expected in case any natural language.

Let us take an example of an affirmative sentence.

English Sentence: He played football.
Bangla Translation: tini football khelechilen .
PLIL: *<aff{sub_np (he noun masculine singular third [human] [tini :m 8] [] [])} {obj1_np (football noun neuter singular third [thing] [football: m3] [] []} k1{main_vp_active (play_1 verb_3 normal normal masculine singular third [khel] 10 [] [])}> .svram*

In this sentence, “he” is the subject noun phrase, the POS tag is noun, GNP is masculine, singular, third. played is the main verb which is active in nature and its root is play, corresponding GNP is masculine singular third and the tense-aspect-modality is past normal, i.e. simple past. football is the only one object here and its POS is noun, GNP is neutral singular third. But in the PLIL these explanations are little bit cumbersome. The tree viewer module transferred this bracketed structure to the corresponding tree form, which is easy easier to understand. So, for a given English sentence, this tree can be used to gather the knowledge about the structures of the different constituents present in the sentence. Tree viewer also provides the subject-object information of a given sentence. So anybody can easily learn the English language construct and corresponding grammar with the help of this system. The PLIL tree has been shown is Fig.1.

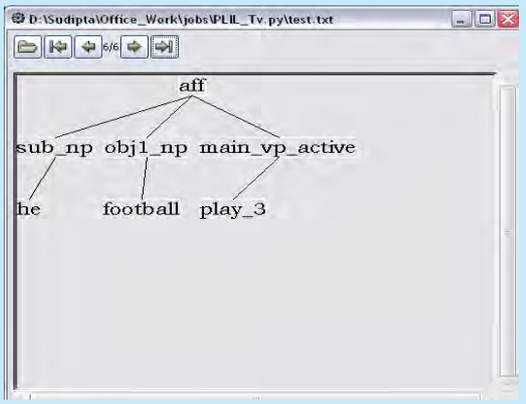

Fig.1. PLIL Tree Viewer