

CLE SEMINAR SERIES

Topic: Performance Analysis of Weather Information System

Presenter: Mr. Muhammad Qasim

Presentation Date: 6th October, 2015

Venue: KICS Seminar Hall

Time: 11:30 am-12:30 pm

Abstract:

The weather Information system provides the weather report of 139 districts of Pakistan through mobile-based dialog system. The architecture of the system consists of a telephony framework and Galaxy Framework. Telephony framework provides the basic functionality of handling the call, recording the user response and playing the system response to the user. Galaxy framework provides the functions of controlling the dialog flow, recognizing the user response, acquiring the weather information and generating the system response to be played to the user. The system is deployed at Pakistan Meteorological Department (PMD), Islamabad. The system keeps log of every call which contain the results of Speech Recognition Systems. A number of issues were discovered by analyzing the logs. Some of which included multiple words spoken by the user, incorrect response of the user, out-of-vocabulary words and busy tones where users disconnected the call. Considering these issues, some modifications were made in the system to improve its performance. A new busy tone detection module and a new voice activity detector were integrated. An example response was added to guide the user on how to use the system. To improve the out-of-vocabulary word detection, some tweaking was done to improve it on previous log files. After making these modifications, this modified system was put online and new logs were recorded. The analysis of these new logs show that busy tone detection has improved a lot but the performance of out-of-vocabulary word detection has degraded. Overall success rate of the system has improved from 57% to 70%. In future, work would be done to improve the accuracy of out-of-vocabulary word detection and modifications in the dialog design to improve the system performance.