Development of a Hybrid Prediction Mechanism using SMA and EXS Methods for GSM Logical Channel Load Variables

Volume 109 - Number 1
Year of Publication: 2015

Authors:
Garba S
Mu'azu M. B
Dajab D. D

10.5120/19151-0577

Abstract

The GSM logical channel load are stochastic (random), distinct in time (Erlang) distribution data; and as such it requires robust means of its prediction. The method employed in this work for the predictions is a hybrid of Simple Moving Average (SMA) and Exponential Smoothing (ExS), which can fit in to predict logical channel load variables with it peculiarities. A three (3) month Data were used in determining the number of observations for the prediction \( n \) for SMA and smoothing constant \( \beta \) for ExS. The determinant values obtained are \( n = 28 \), and \( \beta = 0.077 \). These values are used to predict the logical control and traffic channels load variables that characterizes its utilization.

References

- Poularikas A. D. 1999. Probability and Stochastic Processes. The Handbook of

**Index Terms**

Computer Science Wireless

**Keywords**

GSM SMA ExS and Logical channel.