Forecasting project schedule performance

Access to new resource related to project scheduling and time management added to PMWL

Resource provided by [Balzhan Khamitova](#)

28 February 2022 – Almaty, Kazakhstan – Access to a new resource has been added to the PM World Library (PMWL) related to Scheduling and Time management. The new resource is titled **"Forecasting project schedule performance using probabilistic and deterministic models"** by Abdel Azeem S.A., Hossam E. Hosny and Ahmed H. Ibrahim.

The authors propose three different methods for forecasting project duration. Since Earned Value Management was not used to predict project duration and was originally developed for cost management, two of proposed methods are deterministic - earned value and earned schedule models. The third method is a probabilistic forecasting method that developed by using the Kalman filter algorithm and earned schedule managements as a basis.

A case study project was used to validate the results and compare the accuracy of different forecasting methods. The most appropriate model is selected based on the lowest average error (in percentage). The results showed that the probabilistic model is more accurate than deterministic models and can be applied to the different project types and different project periods.

In this article, the authors provide detailed information about each of the methods and their implementation in the case study. The results were compared with the Critical Path Method (CPM) that makes the time forecast at activity level.

To access this new resource, go to the (content section name) section of the library at https://pmworldlibrary.net/applications-and-topics/ scroll down to "Basic P/PM Topics", and click on "Scheduling and Time management", scroll down to resource. Must be a registered member and logged-in to access.

This new resource provided through the PMWL university research internship program; [to learn more, click here](#)

For PMWL Post

Abdel Azeem S.A., Hosny, H.E. and Ibrahim, A.H. (2014). **Forecasting project schedule performance using probabilistic and deterministic models**, HBRC Journal, 10:1, 35-42. Available online at (https://www.tandfonline.com/doi/pdf/10.1016/j.hbrcj.2013.09.002?needAccess=true) ([Khamitova](#))

Kalman Filter is one of the most important and common estimation algorithms. The Kalman Filter produces estimates of hidden variables based on inaccurate and uncertain measurements. Learn more at https://www.kalmanfilter.net/default.aspx (Khamitova)

Where to post in the library: https://pmworldlibrary.net/scheduling-and-time-management/