

Tanapon Rojtinnakorn 2010: Web Application and Wireless Network for Improving Material Requirements Planning System. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Assoc. Prof. Dr. Mongkol Raksapatcharawong, Ph.D. 92 pages.

“Material Requirements Planning” is a system, which concerns with managing inventory and producing material until finishing goods that be ready to submit to approach customers. Each process must have a procedure to check number of product. In the old-fashion, staffs have to take a paper to collect data from production line and warehouse. Nowadays, quality standard requires document keeping. In this way, production status document must be kept for quality checking. However, keeping document is a big problem. Applying wireless and web technology for this process, working will be more flexible and rapid. Planning data for each process can be received rapidly. Improving “Material Requirements Planning” system by web and wireless technology help auditor to collect data both of number of product and production problem. This process is recorded by mobile devices that are small and flexible to check in production line. And the program is developed for this web technology is flexible for using because it runs on web browsers. Therefore, it is not necessary to install the program on computer clients, only they have web browser and connect to the server. Then they can run the program suddenly. Furthermore, this research developed an algorithm to control users and divide users’ privilege to prevent chaos of data collecting. After that data is processed and forecasted the situation of production capability by using “Least Square Method”. And the method is linear because the range of time is not long. Therefore, Linear approximation is suitable for short time forecasting. From the method, it is possible to know the efficiency of production process and it will be finished in time or not.

---

Student’s signature

---

Thesis Advisor’s signature