

MyETMS – Employee Time Management System

An extendable, widget based, single page JavaScript web application that allows for different permissions in order to track and manage employee times from any mobile device.

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Initial Inception Date: September 14, 2014

Expected Completion Date: January 2015

Abstract

The goal of MyETMS is to create a single-page, custom, browser based application that allows companies the ability to track employee time whether the company functions in an office setting or remotely out in an ever changing field. We aim to create a “widget” based solution where each widget provides self-contained functionality that we can develop and implement to tailor the software to the requirements that each individual company needs. This provides companies with an expandable, inexpensive solution that requires no additional software to install. The only requirement is a device that can access the internet.

Employees should be able to enter time can amend time, supervisors should be able to approve time and admin should be able to create projects, manage users and create spreadsheets off of the data captured, all from their cell phone.

The backend will be developed using PHP with a database accessed with MYSQL. This will be the API in which the front end accesses to retrieve and update data on a centralized server. All data will be created and manipulated client side using JavaScript and JQuery, with all data retrieval done via AJAX, to create a seamless user experience.

Keywords: client side processing, single-page application, widgets, plugins, browser based, mobile centric, time management solution, custom functionality, extendable, cost efficient, ETMS

Project Description and Innovation Claim

My brother, mother and father owns and manages an electrical contracting company that does work for APS and Palo Verde Nuclear Power Plant. Every day they attempt to keep track of 60 employees across 4000 acres with many working offsite.

Since their employees work at a nuclear power plant, they are held to strict safety procedures. When they sign in for the day, they must immediately acknowledge attending a “pre-job brief” which outlines the safety protocols for the day. Upon signing out for the day, they must acknowledge if anyone was injured that day and if so, they must acknowledge who they reported the injury to. This is one of the many specific requirements that plague the employee’s timecard.

Currently, they track all time on paper timecards and then they transfer it to a digital copy weekly. Looking into the issue, I researched the options out there, which there are many. There is Kronos, eBillity, Intuit Payroll to name a few. As I presented the options, I realized, for one reason or another,

they simply did not fit what my families company required. They were too “Specialized”. Either the fields or functionality required were not available, too expensive, or not available on any mobile device. Some promoted apps, but either required a price per download (which added up in cost quickly), or were not available on the wide variety of mobile operating systems that inhabited my parents company.

I quickly recognized an issue with the current software available. They were attempting to create a one size fits all piece of software, or they attempted to lump the companies into generic categories. My parents company was lumped into Construction/Contracting. Unfortunately, in reality, companies are as diverse as the people that run them. It is difficult to lump them into categories.

What my parents company needed is a custom solution, yet they did not have the desire to spend tens of thousands of dollars to invest in a solution that could be outdated in a few years.

How can they get the custom time management system they need on a wide variety of platforms?

My Employee Time Management System or MyETMS is a widgetized, single-page JavaScript Application that works as a custom solution to companies’ time management problems. It is designed and developed for browser based mobile use, which means any modern mobile device, has full functionality.

Custom requirements are developed in the form of widgets, so they are self-contained pieces of functionality that work very much like plugins to a piece of software. Once they are developed, they can be re-used, tweaked or re-sold, and installed much like WordPress Plugins. This keeps development efforts down, which in turn keeps custom costs down for the customers.

So in effect, MyETMS is a platform for Time Management, not a single piece of software. It is specifically designed for mobile devices, with an equally appealing desktop interface available. This allows employees and supervisors to sign in, track, and manage time from anywhere on a device most convenient to them. It allows the company the ability to dictate what the software does, and not the other way around.

Usage Scenario

At the beginning of a user’s work day, they will log into their companies portal via an in browser login screen from any current mobile or desktop device. From there, depending on their permissions, they can log their time, amend previous entries to their time, approve project time, run custom reports and generate spread sheets. Administrators can manage users and projects, all from a mobile friendly browser based GUI.

Additional functionality can be scoped out on a widget by widget basis. Once developed, future installations can be made by way of plugin installation via a few button presses.