



CASE STUDY //

# DATA LOGGER

Automated Pay Per Use  
Billing

January 2018 | Version 1.0

**Technology/** Simcom GSM / GPS  
modem with custom firmware pro-  
gramming in LUA scripting lan-  
guage, C#.Net – MVC5 - MSSQL,  
HTML5 / JQuery, Google Maps  
API, Fully Responsive Design

**Powered by over 13,000 employees across 60+ countries, CHEP is part of Brambles Limited, the ASX-listed global supply chain solutions company, which is ranked among the Forbes 1000.**

**Chep had been facing the problem of improving the accuracy of the billing system of their over 300 million pallets and containers that were based on pay per use kind of an SLA.**

The biggest challenge CHEP faced was that these machines were put into operation at their customer's remote warehouses and factories across the Australian sub-continent and the company had to invest majorly in skilled manpower to be able to physically visit those machines and manually record the rotation counter and submit that data back to the HO for reverse calculating the bills. This was a labour intensive and costly affair and highly dependent on skilled resources that were sub contracted to third parties.



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To mitigate this problem Intermind introduced a GSM /GPS modem from Simcom and programmed it to interface with an opto-coupler and planted it into the machines so that it could record the machine's rotary cycle and sync the recorded counter data to our servers using the 2G / 3G data connectivity along with its GPS coordinates.

We also developed a full-fledged data visualization dashboard using Microsoft .Net technology which assisted the company's operations team to track the periodic billing count per machine and generate bills for the specified period. It also helped them to track their machines' location which in-turn sorted their asset movement and allocation processes.

The system has been further evolved to manage a whole bunch of other features that have automated related processes and helped CHEP improve on the accuracy, access to information on a real time basis and improving the bottomline of the organization



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# Features

01. Tracking rotary counts
02. Tracking asset movement using GPS
03. Auto bill generation based on the recorded rotary counts for a
04. Asset allocation tracking using Geo fencing.
05. Service due alarms and notifications based on date and usage
06. Auto allocation of services engineers based on location using GPS.
07. Break down / asset underutilization alarm in case the machine remains non-operational for a considerable amount of time.
08. Remote configuration of parameters and firmware upgradation using GPRS & SMS.

# Application Uses

- Utilization or operation tracking of portable or fixed machines.
- Asset / Vehicle tracking
- Remote monitoring of scientific parameters like temperature, rigidity, humidity, viscosity, fluidity, orientation, acceleration etc.

Intermind is India's first truly 360° Digital Agency. Our services include Internet of Things, Virtual & Augmented Reality (Mixed Reality), Wearable Technology, Web & Mobile Applications & a Digital Marketing Suite consisting of Search, Email, Social & Content Marketing.

Some of our key clients include NSDL, GVK, Tech Mahindra, Tata Nelito, Commonwealth Handling Equipment Pool, Asian Paints, Anchor Panasonic, Senco & Renuka Sugars.

Visit <https://www.intermind.in/> for more details



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