



Spot Billing and Collection Solution

for Hyderabad Metropolitan Water Board

Abstract

Callippus Solutions is working with Hyderabad Metropolitan Water Supply and Sewerage Board (HMWSSB) to provide a comprehensive Spot Billing and Collection solution with the goal of maximising revenue collections.

Implementation began in the year 2009 and the new system has been on stream for around 3 years now. Solution leverages modern Handheld E-PoS devices from Visiontek and a bespoke portal solution to provide real-time communication infrastructure to the hand-held devices.

More than 600 devices are currently deployed in the field and the collection/billed amount ratio has seen a steady rise with collection for some months reaching even 100%.



Client Overview

The Hyderabad Metropolitan Water Supply & Sewerage Board supplies potable drinking water to the citizens of twin cities.

as of December 2012

The utility was concerned about its low collection efficiencies. Considering that the meter readers in the field are not sufficiently qualified, HMWSSB needed a solution that was simple yet powerful enough to significantly improve its efficiencies.

No. of Households:	750,000
Billed Amount per month:	35 Crores INR
No. of Meter Readers:	600

The Business Need

- Improve Billing & Collection efficiencies. Achieve Collection/Billing ratio of more than 95%.
- Institute appropriate controls to minimise revenue leakage because of:
 - Fraud
 - Meter reader inefficiencies
 - Billing errors
- Roll out changes to tariff plans faster
- Drive to clear all outstanding arrears of defaulting customers

Expectation from Spot Billing and Collection Solution

- Real-time Billing and Collection information on a central server.
- A system by which bills for all its customers are generated by 15th of each month. This would allow sufficient time for collections.
- Ability to collect on-the-spot, immediately after generation of the bill, for better custom experience
- Settle receipts from meter readers on daily basis
- Manage both In-house and outsourced Collection Agencies – One on Post-paid model and the other on Pre-paid model.
- Generation of Real-time Exception reports (like Defective Meters, Bill variations, etc.,) to take quick corrective action
- Meter reader performance monitoring
- Tight integration with the utility's back-end ERP system

Key Challenges

- ◆ Low Collections (Less than 60% of billed amount)
- ◆ Severe revenue leakages:
 - Wrong meter readings – because of deliberate fraud as well as erroneous meters
 - Compounding arrears because of continuous defaults by a segment of customers
 - Unable to bill all customers in time because of poor billing infrastructure
- ◆ Poor meter reader output/performance
 - Some Meter readers not working designated 8 hours/day
 - Low motivation
- ◆ Lack of visibility on the real-time billing and collection information
- ◆ Real-time Billing and Collection information on a central server.
- ◆ A system by which bills for all its customers are generated by 15th of each month. This would allow sufficient time for collections.
- ◆ Ability to collect on-the-spot immediately after generation of the bill for better customer experience
- ◆ Settle receipts from meter readers on daily basis
- ◆ Generation of Real-time Exception reports (like Defective Meters, Bill variations, etc.,) to take quick corrective action
- ◆ Meter reader performance monitoring
- ◆ Tight integration with the utility's back-end ERP system

Our Solution

- Online-Offline Billing-cum-Collection solution with seamless server integration using GSM/GPRS as well as LAN.
- E-PoS based Billing Engine built from scratch to make it flexible to easily accommodate future plan changes
- Rate plans since 2005 implemented (to accurately cover arrears)
- Server-side (Middleware) solution highly integrated and automated with back-end ERP to ensure meter readers get Billing data downloaded into their devices on the 1st of every month. Billing data is downloaded into devices on LAN for quick data transfer.
- Ability to push all transactional data (without user intervention) to the server via GPRS. Automated Nightly update of transactions from middle-ware server to ERP server.
- Receipts collected from Meter Readers (in the ERP system) at Board office is propagated into Middleware and thereby respective Meter Reader device on a Real time basis.
- Several controls implemented like:
 - Configurable Billing thresholds to identify both exceptionally low as well as exceptionally high bill amounts.
 - Daily closure of Collection activities. Meter readers will not be allowed to operate till each day's data is posted to central server.
 - Handling Credit Limits for Meter Readers/Bill Collectors representing both Board as well as External Agencies to accommodate Post-paid and Pre-Paid models. Device will be blocked for use when Credit Limit is reached and Bill Collector needs to necessarily deposit amount before being able to receive collections.
 - Central Active Directory based authentication for device logins to track and monitor field activity.
 - "Notices monitoring" for customers with arrears greater than Rs. 5000/-
 - Effective MIS for quick top-management decision making.

Benefits to Client

- ◆ Significant improvement in Collection efficiency because of sustained goal setting and monitoring performance against set targets – Daily as-well-as monthly targets set for Collection Amount as well as Consumers to contact and achievements recorded against set targets
- ◆ Systemic changes brought in closure of arrears significantly
- ◆ Higher number of days available for Billing and Collection because of high automation
- ◆ Better Meter Reader performance tracking because of improved data from the field.
- ◆ Memos to Meter Readers with poor performance.
- ◆ Reduced Revenue leakage
 - Eliminated billing related errors completely
 - Daily closure collection information along-with Credit Limits ensured receipts from customers are deposited in right earnest into Board account.
 - Exception reports to control Meter Reader – Customer collusion for bill non-payment. Rotation of Meter Readers an additional factor in facilitating this.
 - Better tracking of Exception bills – Ex: Meters stuck or in repair
- ◆ Effective MIS for quick top-management decision making

About Callippus



Callippus Solutions has been in the forefront of technology providing turnkey solutions using E-PoS devices seamlessly integrated with server side software. Our innovative solutions have enabled several businesses realize the goals of their transformation projects.

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