

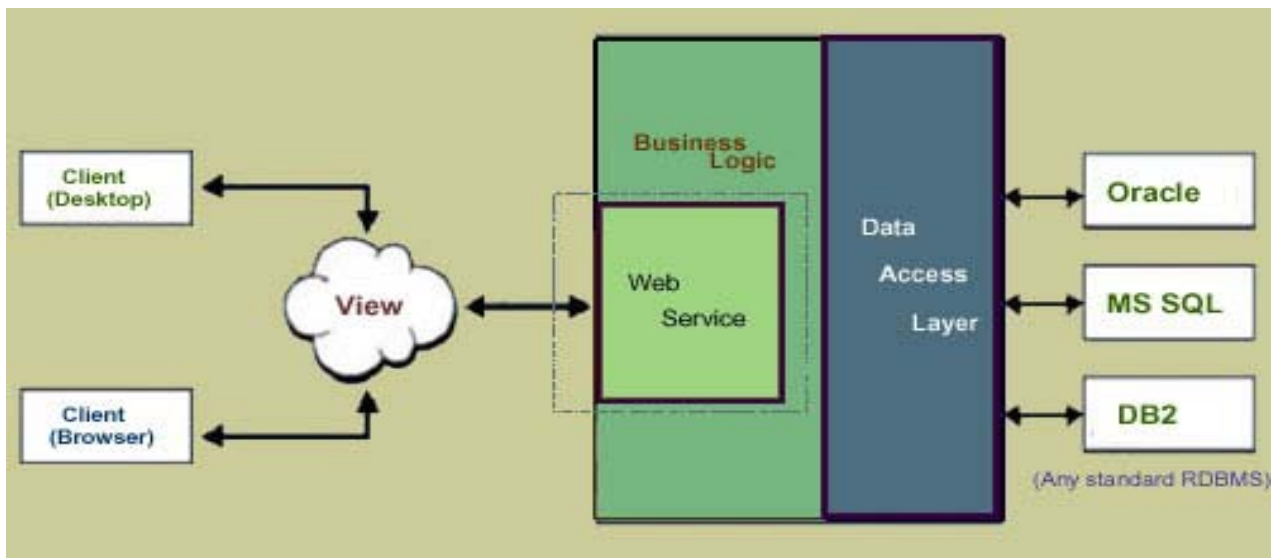
## Software for Tea and Rubber Plantations

**CCS Technologies (P) Ltd.** is a Software Development & Services company in South India having its presence in Australia and Bangalore with two Development Centres in Cochin. Matured software engineering and management practices in CCS help to provide the best solutions and services within a predictable schedule and cost. The company has adopted world-class standards in development, support and services and strives to improve products, processes and systems continuously.

CCS has developed an integrated software solution for the Plantation sector, which facilitates the Owners, Estate Managers and Accountants to take better decisions and to manage the business successfully. Features of the customized solution provided to **Tea and Rubber Plantations** based on specific requirements are summarized below.

### A. Architecture & Design

1. This software is developed on **Service Oriented Architecture** with **Web Services** for internal and external integration. This increases the horizontal expansion and future requirements can be developed as independent modules, which can be integrated through web services.
2. The **n-Tier Architecture** makes the application scalable vertically to meet the requirements of very large companies. The different components of the system viz: Business Logic, Database and Web Services can be deployed on different servers for improving response times for large installations.



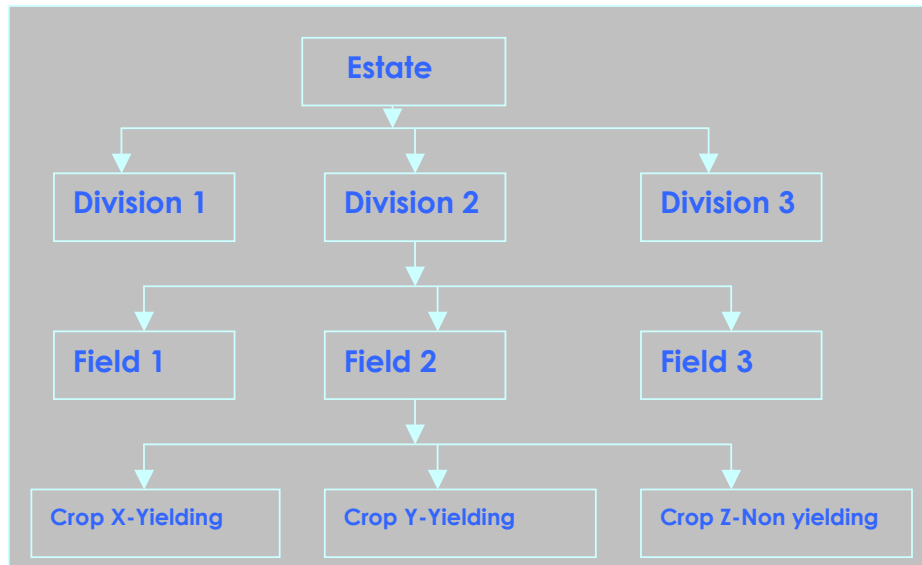
3. This is developed in VB.Net and can work with any popular database such as Oracle10g, IBM DB2, Sybase 7, MS SQL Server etc.

## B. Functional

### 1. General

1. Management of multiple Estates and Divisions with the concept of Fields and Crops.

Each Estate can be divided into multiple Divisions and these divisions can be subdivided into Fields. Each field can hold different Crops and can be categorized as yielding and non-yielding.



2. Multiple Factories

Each Estate can have factories attached to them for processing the Crops to make different products that can be marketed by the company.

3. Multiple Stores

Stores at various levels for storing the Crop, product and different other items used for Weeding, Manuring, chemicals used for production etc can be defined. Estate store, division store, store associated with factories etc are some of them.

### 2. Check Roll and Wage Processing

1. Single point entry for Attendance, Crop collection and work distribution. A single entry screen is designed for daily data entry, which can be used for attendance entry, crop collection by a worker and job distribution among skilled and un-skilled workers.
2. Check Roll processing of staff, skilled and unskilled workers, based on Plantation Rules. Wage processing for regular staff, skilled and un-skilled workers with the facility to calculate incentives and job differentials. Calculations can be made on plantation sector rules. Weekly cash list can also be generated from the system. Casual laborer's payments also can be automated.
3. Provision for Incentives calculation based on over kilo production. Incentives can be calculated for the workers based on the crop collection they make on a daily basis. For every kilo they collect above the field average may be taken for incentive calculation.
4. Automated processing of bonus, leave with wages, gratuity, investments etc. Bonus calculations, Leave with wages calculation, gratuity calculation, investments deduction etc can be automated in this module.

### 3. Accounting

1. Accounting module based on Cost Center and Crop.  
Voucher entries can be allocated to Cost Centers and Crop.  
This facilitates the analysis of ledger for statutory purposes.
2. Apportioning of General expenses, factory loss to Cost Centers.  
While reporting, the general charges expended at Estate level can be apportioned among cost centers like divisions or fields. Factory loss/excess also apportioned to cost centers based on their yield.
3. Automatic posting from other modules to Accounts.  
Automated posting of expenses and income from other modules is possible.
4. All reports such as General Ledger, Trial Balance, Profit & Loss etc., except Balance Sheet can be processed at Estate Level as well as consolidated at HO level.
5. Budget estimation for expenditure and crop.  
Monthly cost center wise budget entry for expenditure heads and crop. MIS reports can be built based on this.

### 4. Inventory

Inventory Module has provision for

- Purchase Order
- GRN
- Purchase Return
- Stock Transfer
- Stock Issue to different fields
- Physical Stock Verification

### 5. Asset Maintenance

Management of assets like Machineries in the factory and their maintenance schedules can be tracked. This facilitates easy tracking and verification when Asset items are moved continuously from Estate to Estate or HO.

### 6. Sales

Sales module has provision for

- Sales Order entry
- Invoicing
- Packing & Dispatch
- Sales Register
- Despatch Register

**Packing** - To enter the packing details by specifying the date, type & grade of product, lot number and number of barrels/bails.

**Delivery Challan (Dispatch)** - Dispatch can be done by entering Delivery Challan with Invoice no., lot number, barrel no., barrel weight and net weight, in case of latex. For field-coagulum the details to be entered are grade, lot no., No. of bails (25kg=1 bail), from and to number of bail and net figure. Test Result of each lot will be printed along with the delivery challan.

## 7. Production

Include provision for

- Collection of Crops from fields
- Issue for Production, details of production
- Test Result entry
- Grading of the product based on visual and non-visual [lab results] properties,
- Packing of different products to different specifications like barrel, tanker, bags

## 8. MIS and Consolidation

Some of the MIS reports, which can be generated, are:

- Yield-Analysis
- Cost of Production Statements based on Yield
- Fuel Consumption
- Job Summary Reports like Manuring, Weeding, Pruning, Tree Census
- Rain Fall Analysis
- Fuel Consumption Analysis
- Daily Work Report
- Rain Guarding
- Spraying Report
- Abstract Absenteeism Statement
- Latex & FC % for a Tapper
- Tree Census – Rubber/Tea

Various Statutory Reports for different government organizations can also be generated from the system.

## 9. Plans for the next release

In addition to this we are in the process of adding more functionality in Costing, Budgeting and MIS, which will be included in future releases.

The reports envisaged are

**MIS Factory** – Yield/Hectare, Tapping Average, Vacant Blocks, FC %, Production Variance, Factory Outturn, Man power out turn, FC Details, Sales Details, Medical Expenditure details, Sickness Benefits, Revenue Expenditure – Actual Vs Estimates – head wise for current and past period with COP figures, Replanting Expenditure Report

**MIS of Man days** – Division wise/Employee category wise - A single very broad and detailed report covering almost all aspects of estates which has got more than 200 items for monitoring

**Month wise budget** – each item wise, Replanting Estimation, Tapping Estimations and a Budget Abstract

## 10. Sample Screens and Reports

To get preliminary information about the product, few of the existing screen shots and report formats are given below.

### Attendance & Crop Collection

**Daily Attendance**

Date: 01-Jul-2006 Location: K Division

Sl.No	Cr.No	Employee Name	Hours	Leave	LT	Location	Field	Job
1	K00002							
2	K00003							
3	K00018							
4	K00005							
5	K00008							
6	K00009							
7	K00010							
8								

Employee Cr.No \* K00003 & Name MANOJ

Hours \* 3. Leave Full Day

Location K Division Asset Item

Field PARAMBIL Sector RUBBER

Job TAPPING

Harvest			Allowance
Plant	Crop	Block	Quantity
RUBBER	LATEX	KPB2	22.55
	FIELD COAGULUM	KPB2	3.

### Factory Receipts

**Factory Receipt[Modify]**

Receipt: 2 Date & Time: \* 02-Jul-2006 15:01:30

Factory: \* AVT TEA Estate: \* KANJAR

Crop: \* TEA LEAVES Division: \* K DIVISION

Vehicle: 4526 Quantity: \* 30 kgs  Print on Save

Test Parameter	Result	Unit
STD. LEAF PERCENTAGE	69.5	nos

New Save Cancel Browse Delete Print Close

### Production

**Production[Modify]**

Production No  Factory \*  Date \*

**Crop Issue**  Reprocessing Issue

Crop	Quantity	Unit	Issue No.	Product	Weight
LATEX	90	kilo gram			

Total Issue **90.000** kilo gram      Total Reprocessing **0.000**

**Production Output**

Product	C.U.No	Quantity	Unit
CENEX		0	90 kgs

Process Loss **0.000** kilo gram      Total Production **90.000** kilo gram

**Grading**

Product	Grade	C.U.No.	Quantity	Unit
CENEX	SUPER		30	kgs
CENEX	FINE		60	kgs

### Goods Receipt Note

**Plantation Software**

**Goods Receipt Note[Modify]**

GRN No   Purchase  Transfer  Direct      GRN Date \*

Order No \*       Supplier \*       Order Date \*

Invoice No \*       Invoice Date \*

Item	Quantity	Unit	Amount	Other	Total							
Code	Name	Unit	Billed	Rece...	Accep...	Rate	Billed	Accepted	Discount	Tax	Char...	Amount
CUP	PLASTIC CUPS	nos	1500...	1500...	15000...	4.250	6375...	63750.00		7650...	0.00	
KNIFE	TAPPING KNIFE	nos	120...	120.000	120.000	75.000	9000.00	9000.00		1080...	0.00	
			15120				72750	72750	0	8730	0	

Transporter       Other Discount   
 Gate Pass Slip No       Other Tax   
 Weigh bridge Slip No       Apportion by  Value  Quantity  Manual      Other Charges on Bill   
 Debit Note Amount 

OtherCharges	Amount
*	

  
 Remarks

### Pay Heads

Pay Head[Modify]

Pay Head (Code and Name) \* PF2-D    PROWIDENT FUND WITH LOP DLY    Pay Mode  
 Daily     Monthly

Category \* PROVIDENT FUND     Not applicable for harvest jobs    Ap

Level \* Designation     Not applicable for harvest jobs    Ap

**Revision**    **Elements**    **Applicability**

* Add Revision Date		
Rev.No	Revision Date	Effective Date
1	01-Mar-2005	Mar-2005
2	01-Apr-2005	Apr-2005
3	01-Apr-2006	Apr-2006

Press Ctrl + D to delete a row

**Parameters [PF]**

**Employee**

PF %    

**Employer**

PF %   

FPF %

New    Save    Cancel    Browse    Delete

### Work Report

Plantation Management - MIS

Navigation icons: back, forward, search, etc.

**MainReport**

**MALANKARA RUBBER & TEA PLANTATIONS**    Run

**KANJAR**    Rep

Work report for the period 01-Apr-2006 To 31-Mar-2007

**K DIVISION**

Weather details	This Year			Last Year		
	Period	Month	Total	Period	Month	Total
<b>HUMIDITY</b>						
RAINFALL	5.75	5.75	5.75	6.50	6.50	6.50
TEMPERATURE	23.50	23.50	23.50	20.00	20.00	20.00
<b>WIND</b>						
Wet Days	1.00	1.00	1.00	1.00	1.00	1.00

Job Name	Supervisor	Pmen	Pwomen	Tmen	Twomen	Cmen	Cwomen	Total
<b>PLUCKING</b>								
PURACKAL			1.00		1.00			
<b>TAPPING</b>								
PARAMBIL		1.00		2.00		1.00		
<b>WEEDING</b>								

### Factory Expenses

**Plantation Management - MIS**

MainReport

**MALANKARA RUBBER & TEA PLANTATIONS** Run Date: 13-Nov-2006  
**KANJAR** PageNo: 1  
**FACTORY EXPENSES AND PROCESSING CHARGES** for the period from 01-4-2006 To 31-3-2007  
**LUNAR RUBBERS**

Item No	Expenditure Heads	Budgeted		Actual		This Month Processing cost/Kg
		This Month	To Date	This Month	To Date	
1954	ELECTRICITY CHARGES			14,000.00	14,000.00	28.54
1955	ENGINE FUEL WATER ETC					
1956	CURING & CHEMICALS			8,000.00	8,000.00	16.31
1957	PACKING & PACKAGES			4,500.00	4,500.00	9.17
1958	TRANSPORT & CROP INSUARANCE			3,500.00	3,500.00	7.14
1959	LABOROTORY ESTABLISHMENT			5,000.00	5,000.00	10.19
1961	FACTORY WATCHING			11,000.00	11,000.00	22.43
	Total Processing Charges	0.00	0.00	46,000.00	46,000.00	93.78
	Less Processing Chgs on other Estate Crop			0.00	0.00	

Estate wise details of latex processed at **KANJAR** Rubber Factory

Estate	This Month	To Date
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### Production Statement

**Plantation Management**

MainReport

**KANJAR** Run Date : 13  
**LUNAR RUBBERS** Report No: 00  
 Page No 1

Production Statement for the Period From 01-Jul-2006 to 13-Nov-2006

Date	Crop	Receipt			Product with Grade	Production		Despatch	
		Qty	Crop Balance	Unit		Qty	Production Balance	Unit	Qty
01-Jul-2006	LATEX	205.500	461.500	kilo gram					
02-Jul-2006					SR CENEX SUPER	65.000	65.000	kgs	
	LATEX	175.000	556.500	kilo gram					
03-Jul-2006					SR CENEX SUPER	65.000	130.000	kgs	
04-Jul-2006					SR CENEX UG	60.000	60.000	kgs	

**Pay Slip**

Plantation Management - Checkroll

MainReport

**THE TRAVANCORE RUBBER AND TEA CO.LTD**

Estate : KANJAR Run Date

Employee : ALEX MATHEW Check Roll No : A000000021

Month	Division	Last Month Payable	Last Month Paid	Employee Type	Rubber GTR	General WorkDays	Diff Days	Basic Amount	DA	Diff Pay
April 2005	KJR-DIV2		0.00	SW1	661.75	0.00	4.00	1,666.25		687.5
Paid Holiday	LWW	Tapping Days	Rubber Kg & Pay	Latex Over Kilo & Pay	Scrap Over Kilo & Pay	Tea Plucking Days	Std Kg & Pay	1st Over Kilo & Pay	2nd Over Kilo & Pay	3rd Over Kilo & Pay
2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Service Weigh tage	Earnings with PF	Earnings W/O PF	Sundry Credit	Last Month Credit	Total Earnings	PF Deduction	Investment	Advances	Store Cash	Deduct
		3,224.75	209.25	0.00	3,224.75			133.00	2,782.34	45.34
Deduction 2	Deduction 3	Deduction 4	Deduction 5	Deduction 6	Deduction 7	Deduction 8	Deduction 9	Deduction 10	Last Month Debit	Total Deduct
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,960

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