EJM Construction Software

EJM develops and implements software for the construction industry
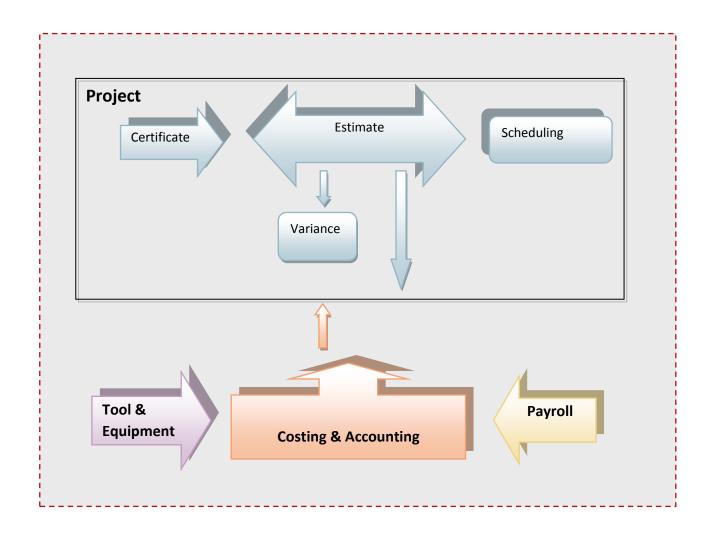

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The Company was founded in 1982 by **Ernst Marais**, a professional civil engineer with a Master's degree in management.

Overview of the EJM system

The EJM System consists of 4 modules
- Payroll
- Costing & Accounting
- Tool & Equipment
- Project

The modules can be used independently or together to form a very strong management tool.

An integrated construction management system should start at a thorough estimate.

This forms the basis for cost comparison as the project progresses.

Costing and Accounting

Since 1982

Key Features

- Costing to 3 levels
  - ➢ Project
  - ➢ Resource
  - ➢ Cost Centre

- Integrates with EJMProject, EJMPay and Tool & Equipment

- Unlimited number of accounting systems

- Financial statements

- Comprehensive cost and variance reports

- Orders & stock

- Creditors & subcontractors

- Multiple accounting years

- Clients (debtors)

- Contract invoicing & retention

MS Access and SQL based systems

Our software is used throughout Southern Africa by a diverse user base, primarily in the Building and Civil Engineering industries. Our focus was initially on small to medium construction companies using **MS Access** as the database.

In order to cater for the needs of large construction companies, the Accounting system was completely rewritten utilizing the Internet and **SQL** as the database. With this approach, there is no limit to the number of users or location of the user.

Our standard of excellence was recognised by Microsoft when the EJM SQL core module was the first program in South Africa to gain *Microsoft Vista Certification.*

If you are serious about cost management

Job Costing

- Track the project's cost trends during its execution.
- The *Project Profit & Loss Report* gives Top Management a bird's eye view of the project's profitability.
- Variance (allowables vs. actual) reports triggers Site Management's action
- Detailed cost reports pinpoints costs
- Period based cost reports lists the costs and summarizes the current Life and *Year-to-date* costs

Sub Contractors

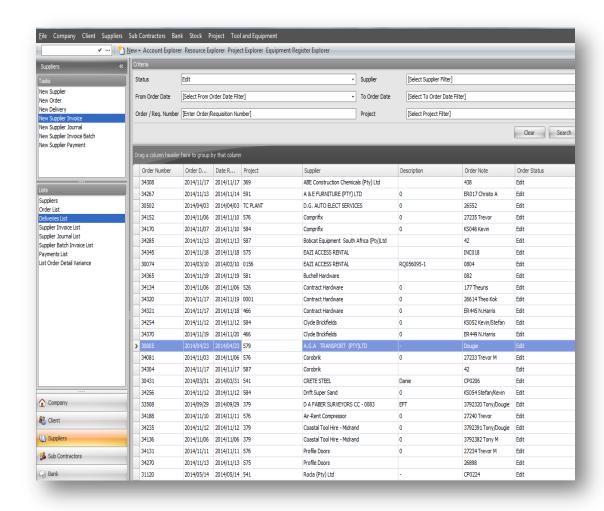- Create subcontractors certificates based on the allowables generated in EJMProject
- Enter the progress against the payment items for every certificate cycle
- Manage payments, retention and statutory requirements.

Financial Reports

Financial reports such as

- Balance Sheet
- Income Statements
- Trail Balance and
- General Ledger, can be drawn for a specified financial year and/or period range.

Orders

- Create the orders based on the allowables generated in EJMProject
- For early job costing, enter delivery notes flowed later by the invoice on which the payment is based
- Variance report per order to track quantity and monetary overruns
- Creditors' invoices can be marked for payment and after approval imported into banking software.

Clients: invoices, certificates and retention

- Tax invoices can be created for once off services rendered
- It also caters for a *Point of sales* environment linked to a stock system
- In a construction environment where multiple payments on a project are made, the certificate method of invoicing is used. The progress can be recorded through the link with the certificate system in EJMProject.
- This caters for retention, provisional claims and VAT management

Key Features of EJMProject

Estimate

- Import from WINQS/ Bill/ Excel
- Resource Library
- MasterBill for pricing recurring items
- Resource analysis
- Multiple mark-ups
- Cost Centre analysis

Scheduling

- Timios Bar-chart
- Cash flow projection
- Cash flow client
- Resources based on bar chart

Certificate

- Progress per percentage
- Progress per unit
- Progress per worksheet
- Material on Site
- Escalation

Description	Fina	LabSell	MatSell
Warehouse	☐		
Earthworks	☐		
Clear site from vegetation, rubbish, shrub,	☑	0.60	2.08
Excavate in earth in bulk not exceeding 2M	☑	2.79	43.67
Extra over excavation in rock (compressor	☑	136.62	90.82
Earth fill from excavation and compacted t	☑	1.68	35.34
Concrete & reinforcing	☐		
Mass concrete	☐		
20MPA Concrete in blinding layer under ba	☑	65.10	1 026.38
20MPA Concrete in surface trenches	☑	65.10	1 026.38
Reinforced concrete	☐		
25MPA Concrete in column stanchion base	☑	429.65	1 086.75
25MPA Concrete in slabs	☑	179.02	1 086.75
High tensile reinforecement (Y) in bars of 2	☑	10 350.00	
Brickwork	☐		
One brick wall in foundations	☑	179.40	197.61
Half brick wall in super structure	☑	89.70	98.80
One brick wall in super structure including	☑	179.40	197.61
Plaster and roofing	☐		
External plaster	☑	28.75	17.65
Internal plaster	☑	28.75	17.65
Roof complete	☑	86 250.00	
Excavate in earth bulk not exceeding 2m deep and	☐		

Estimate

Import from WinQS/Bill/Excel

- The Bill of Quantity can be imported from WinQS, Bill and Excell or it can be typed in.

Resource library

- EJMProject is a resource-based system.
- The estimate is done in terms of resources (e.g. plant labour, materials, subcontractors).
- EJMProject maintains a library for resources, preferred suppliers and rate options.

MasterBill for pricing recurring items

- The MasterBill is a collection of items, similar to items in a Bill of Quantities.
- It can be seen as a standard list of recipes that the Estimator builds up and carry over from estimate to estimate.
- The concept behind it is to save time – build up assemblies that are re-used (e.g. excavation team, one brick wall) – and use these assemblies to rapidly price a new Bill of Quantities.

Resource and cost centre analysis

- Various reports are available for analysis of the estimate.
- A report can be drawn to generate a list of all allowables (shopping list) needed for the project. Thus decisions can be made how to adapt the estimate.
- BoQ-type reports such as Cost, Sell, High to Low and Price make up.

Reasons for using EJMProject

- Consistent high quality estimates

- Starting point for the control system

- Ease of use

- On site, telephone, email & Internet support

Scheduling

Timios Bar-chart

- EJMProject utilizes Timios, a Gantt program to create and output a schedule.

- It has a MSProject look and feel

Cash flow projection

- The BoQ is linked to the different bar chart activities
- With this, the cash flow schedule can be determined

Resources based on bar chart

As the Estimate is linked with the Schedule, it is possible to determine the resources needed within a given time and activity interval.

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Materials on site

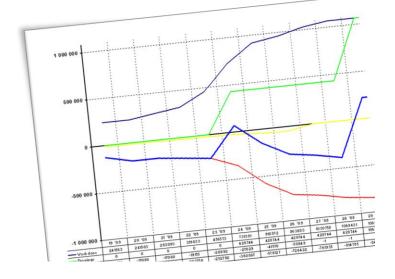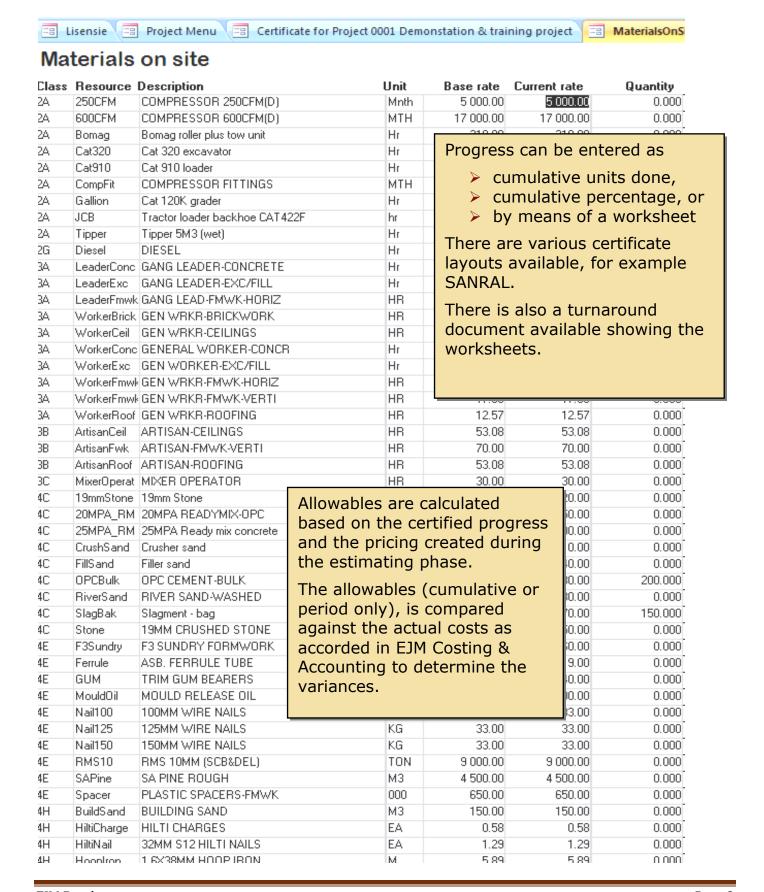| Class	Resource	Description	Unit	Base rate	Current rate	Quantity
2A	250CFM	COMPRESSOR 250CFM(D)	Mnth	5 000.00	5 000.00	0.000
2A	600CFM	COMPRESSOR 600CFM(D)	MTH	17 000.00	17 000.00	0.000
2A	Bomag	Bomag roller plus tow unit	Hr	210.00	210.00	0.000
2A	Cat320	Cat 320 excavator	Hr			
2A	Cat910	Cat 910 loader	Hr			
2A	CompFit	COMPRESSOR FITTINGS	MTH			
2A	Gallion	Cat 120K grader	Hr			
2A	JCB	Tractor loader backhoe CAT 422F	hr			
2A	Tipper	Tipper 5M3 (wet)	Hr			
2G	Diesel	DIESEL	Hr			
3A	LeaderConc	GANG LEADER-CONCRETE	Hr			
3A	LeaderExc	GANG LEADER-EXC/FILL	Hr			
3A	LeaderFmwk	GANG LEAD-FMWK-HORIZ	HR			
3A	WorkerBrick	GEN WRKR-BRICKWORK	HR			
3A	WorkerCeil	GEN WRKR-CEILINGS	HR			
3A	WorkerConc	GENERAL WORKER-CONCR	Hr			
3A	WorkerExc	GEN WORKER-EXC/FILL	Hr			
3A	WorkerFmwk	GEN WRKR-FMWK-HORIZ	HR			
3A	WorkerFmwk	GEN WRKR-FMWK-VERTI	HR	11.55	11.55	0.000
3A	WorkerRoof	GEN WRKR-ROOFING	HR	12.57	12.57	0.000
3B	ArtisanCeil	ARTISAN-CEILINGS	HR	53.08	53.08	0.000
3B	ArtisanFwk	ARTISAN-FMWK-VERTI	HR	70.00	70.00	0.000
3B	ArtisanRoof	ARTISAN-ROOFING	HR	53.08	53.08	0.000
3C	MixerOperat	MIXER OPERATOR	HR	30.00	30.00	0.000
4C	19mmStone	19mm Stone		20.00	20.00	0.000
4C	20MPA_RM	20MPA READYMIX-OPC		50.00	50.00	0.000
4C	25MPA_RM	25MPA Ready mix concrete		00.00	00.00	0.000
4C	CrushSand	Crusher sand		0.00	0.00	0.000
4C	FillSand	Filler sand		40.00	40.00	0.000
4C	OPCBulk	OPC CEMENT-BULK		80.00	80.00	200.000
4C	RiverSand	RIVER SAND-WASHED		80.00	80.00	0.000
4C	SlagBak	Slagment - bag		70.00	70.00	150.000
4C	Stone	19MM CRUSHED STONE		50.00	50.00	0.000
4E	F3Sundry	F3 SUNDRY FORMWORK		50.00	50.00	0.000
4E	Ferrule	ASB. FERRULE TUBE		9.00	9.00	0.000
4E	GUM	TRIM GUM BEARERS		40.00	40.00	0.000
4E	MouldOil	MOULD RELEASE OIL		00.00	00.00	0.000
4E	Nail100	100MM WIRE NAILS		33.00	33.00	0.000
4E	Nail125	125MM WIRE NAILS	KG	33.00	33.00	0.000
4E	Nail150	150MM WIRE NAILS	KG	33.00	33.00	0.000
4E	RMS10	RMS 10MM (SCB&DEL)	TON	9 000.00	9 000.00	0.000
4E	SAPine	SA PINE ROUGH	M3	4 500.00	4 500.00	0.000
4E	Spacer	PLASTIC SPACERS-FMWK	000	650.00	650.00	0.000
4H	BuildSand	BUILDING SAND	M3	150.00	150.00	0.000
4H	HiltiCharge	HILTI CHARGES	EA	0.58	0.58	0.000
4H	HiltiNail	32MM S12 HILTI NAILS	EA	1.29	1.29	0.000
4H	HoopIron	1.6X38MM HOOP IRON	M	5.89	5.89	0.000

Progress can be entered as

- ➤ cumulative units done,
- ➤ cumulative percentage, or
- ➤ by means of a worksheet

There are various certificate layouts available, for example SANRAL.

There is also a turnaround document available showing the worksheets.

Allowables are calculated based on the certified progress and the pricing created during the estimating phase.

The allowables (cumulative or period only), is compared against the actual costs as accorded in EJM Costing & Accounting to determine the variances.

Key Features of EJMPay

- Tax compliant (All Southern Africa Countries)
- Entering of units or import of clock cards
- User customization of earnings, deductions and provisions
- Report writer
- Additional information fields for employees
- Cost allocations per projects, cost centers and resources
- Various payment options: bank transfer, cheque or cash
- Long term loans with interest calculation
- BEE reporting
- Leave calculation
- Accident and incident reporting
- Disciplinary procedures
- Training planning

Verify employee

Employee:

Identifying the employ
Nature of Person
Surname/Tradename
Tax First Names
Initials
Type of identity
ID Number
Passport country
Passport Number
Birth Date
Tax Number
Directive Number

Contacting the emplo
Home telephone
Cell number
Employee Email:
Period of employment
Tax start date:
Last calc(tax) date

Mandatory field
Select:

Abeti

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Entering units

The easy to use screen allows you to enter units for employees and edit all functions. Once entered, the pay slip can be viewed immediately.

Units can be imported from externally created files such as clocking systems.

User customisation of functions

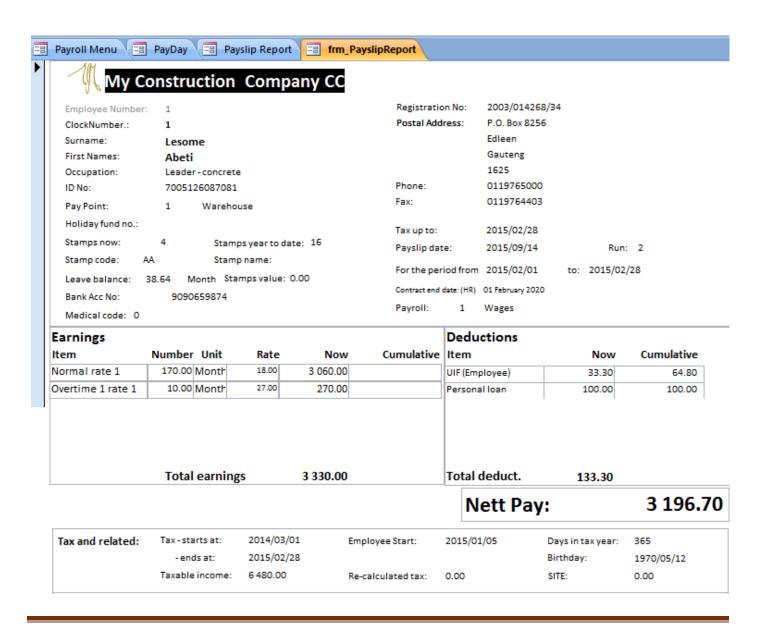Every company differs in terms of earnings, deductions and provisions.

With our flexible parameter driven system we can assist you to set up your functions.

Tax Compliant

EJMPay is tax compliant for all southern African countries and produces statutory reports:

- Income tax
- UIF
- SDL
- Social Security
- WCA

Regular updates ensure that the system comply to regulatory requirements

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| Payroll Menu | PayDay | Payslip Report | frm_PayslipReport |

My Construction Company CC

Employee Number:	1		Registration No:	2003/014268/34
ClockNumber.:	1		Postal Address:	P.O. Box 8256
Surname:	**Lesome**			Edleen
First Names:	**Abeti**			Gauteng
Occupation:	Leader - concrete			1625
ID No:	7005126087081		Phone:	0119765000
Pay Point:	1 Warehouse		Fax:	0119764403
Holiday fund no.:				
Stamps now:	4 Stamps year to date: 16		Tax up to:	2015/02/28
			Payslip date:	2015/09/14 Run: 2
Stamp code:	AA Stamp name:		For the period from 2015/02/01 to: 2015/02/28	
Leave balance:	38.64 Month Stamps value: 0.00		Contract end date: (HR) 01 February 2020	
Bank Acc No:	9090659874		Payroll:	1 Wages
Medical code: 0				

Earnings

Item	Number	Unit	Rate	Now	Cumulative
Normal rate 1	170.00	Month	18.00	3 060.00	
Overtime 1 rate 1	10.00	Month	27.00	270.00	
Total earnings				3 330.00	

Deductions

Item	Now	Cumulative
UIF (Employee)	33.30	64.80
Personal loan	100.00	100.00
Total deduct.	133.30	

Nett Pay: 3 196.70

Tax and related:	Tax - starts at:	2014/03/01	Employee Start:	2015/01/05	Days in tax year:	365
	- ends at:	2015/02/28			Birthday:	1970/05/12
	Taxable income:	6 480.00	Re-calculated tax:	0.00	SITE:	0.00

Additional information for employees

- These fields can store additional about employees, for example shoe and overall sizes for ordering site clothing or even dietary requirements

- This is an extremely helpful feature together with the Report writer which allows you to have information at your finger tips.

Standard reports and the Report Writer

- EJMPay has a large number of standard reports. But sometimes you need a report uniquely to your company or situation.

- With the Report Writer you can easily create your own reports

- All reports can be PDF'd and emailed or exported to Excel for further analysis

Cost allocations per project, cost centre and resource

- The Payroll allocates cost to projects, cost centres and resource.

- You will always know what the labor related cost is for a project.

- Alternatively units for non- costed employees such as head office staff, need not be cost allocated.

Leave Calculation

- EJM manages and keeps track of the leave due to and taken by employees.

- The default allocation is the minimum required by the Basic conditions of Employment Act but it can change to reflect what has been negotiated or according to Company policy

Payment options

- EJMPay creates files that can be imported into your banking software.

- Employees can also be paid by cheque or cash.

- Coinage is worked out taking into account the particular country's monetary units.

Accident and incident reporting

- Register to record the accident with facilities for attaching photographs, police and other reports.

- The comprehensive accident reporting system will assist you to analyze accidents, assisting you to prevent similar mishaps in future.

Disciplinary procedures and dismissals

- A step by step process of recording a disciplinary hearing, ensuring that you have all the information about an employee's disciplinary history for future reference.

Training Planning

- Keeping track of courses employees need to attend, and who should attend them.

Tool and Equipment

Since 1982

Key Features of Tool & Equipment

- Keep track of the assets
- Determine if asset is still cost effective
- Pricing structure
- Invoice per client/ site
- Tracking of equipment
- Usage of equipment
- Profitability reports
- Stock adjustment
- Equipment register
- Internet based for remote entry of data

Equipment register

The Equipment Register allows you to view your Complete Equipment list organized by Groups and Categories.

Issuing and returning a batch

Equipment is issued either to a site or yard. This will enable you to know at all times where the equipment is, and when is it scheduled to be returned

Usage tracking

You can track the usage for all items between selected periods.

The usage can be tracked either by kilometers or hours.

The system will then use this information to charge the site/client for the usage of the item.

If you are serious about cost management

Invoice Run

- The invoice run generates monthly invoices for the renting/sales of equipment to sites.

- You have the ability to select only the site you wish to invoice as well as the period you wish to invoice the selected site for.

- There are two types of invoices generated, an internal and an external invoice.

- The internal invoice raises a cost against the project for the usage of the equipment and generates the contra entry for the Plant Division.

- The external invoice creates a VAT invoice for the external client and raises a revenue entry for the Plant Division.

- Various reports are available to determine the profitability of equipment, at which sites they are, the history of the equipment et. All reports can be exported to PDF, Excel or Word for further analysis.

Pricing Structure

The pricing structure allows you to define rules and rates whereby equipment is leased out to different sites. For example TLB1 is leased out R200 per day + R50 per km

Integration into EJM Accounting

- The Tool and Equipment program integrates with EJM Accounting.

- Thus reflecting the equipment cost to projects or the revenue received from external clients