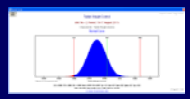


Presenting ...

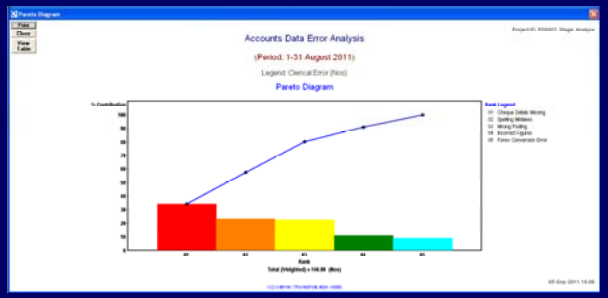
Fact Based Management Tools(R)

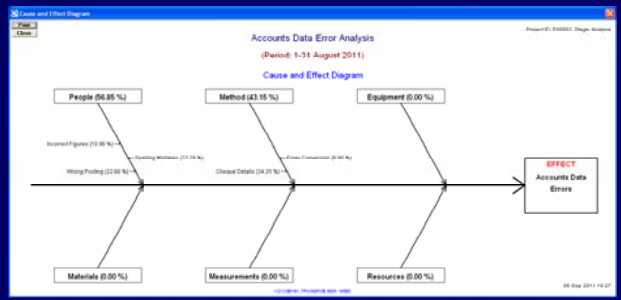
Module: SPC / EPC / Six Sigma

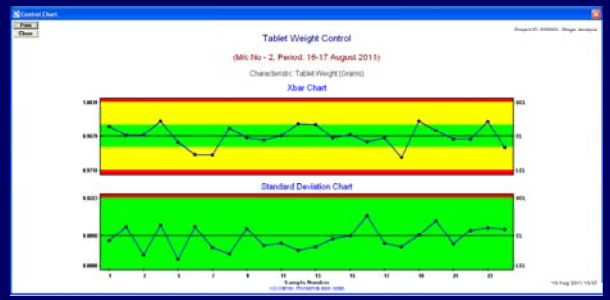
Version 7.2 for Windows XP and later editions.

Computer Software for

Statistical Process Control (SPC), Engineering Process Control (EPC), and, Six Sigma Process Improvement







In this simple demo, our software is presented in the form of a series of screen-shots. It would give you the feel of how the actual software works and looks like.

Narrative is on the bottom panel of each slide. Concepts and features are explained through two enlightening six sigma projects (one from service industry and one from manufacturing industry).

Please press ‘Enter’ or ‘Arrow’ keys on the keyboard to browse the slides at your own pace.

Process Improvement using SPC / EPC / Six Sigma Tools

There is a pressing need for the continual improvement of manufacturing and service processes in today's competitive business environment.

You may follow the time-tested Six Sigma DMAIC approach (Define, Measure, Analyse, Improve, and, Control) in any improvement initiative.

For this, you need to …

1. Identify the areas for improvement

2. Identify the key input & output variables (KIVs & KOVs) that are critical to quality/schedule/cost

3. Collect the relevant data and analyse them using the SPC tools such as C&E Diagram, Pareto, Histogram, Scatter Plot, Control Chart, etc.

4. Take corrective and preventive actions to improve the process, and

5. Install an on-going control scheme (such as SPC or EPC chart) to sustain the improvement.

What is SPC ?

Statistical Process control (SPC) is a scientific and inexpensive way to prevent defects. It is an effective check against assignable causes of process variation. You would require SPC tools for every Six Sigma project.

When to use EPC ?

Once a process is brought to stable condition using SPC charts, Engineering Process Control (EPC) helps in predicting the process performance and pro-active adjustments, thereby reducing process variability. It adds extra power to your process control schemes.

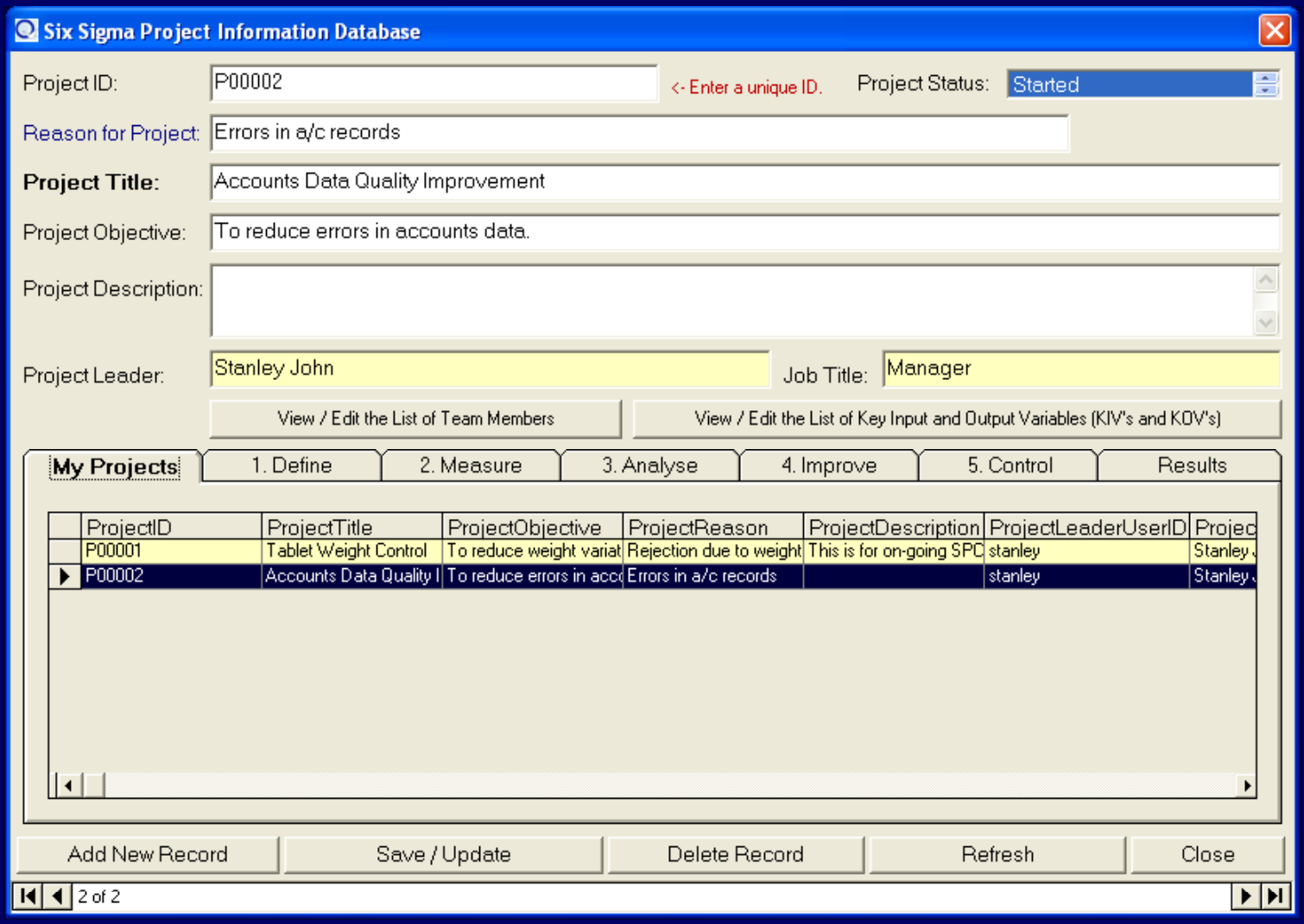
Both SPC and EPC are very essential for achieving the PPM (parts per million) defect levels expected of your Six Sigma initiatives.

In this context, it is very important to provide a statistical software to your personnel for error-free data analysis and charting on regular basis.

Our **FBM Tools – SPC/EPC/Six Sigma module** is a Windows-based computer program designed specifically for improvement projects, by seasoned Engineer-Statistician experts (alumni of the Indian Statistical Institute).

Before getting into the details of the software, let us look at one example project from service industry and one from manufacturing industry, to learn how to put SPC/EPC/Six Sigma tools to use.

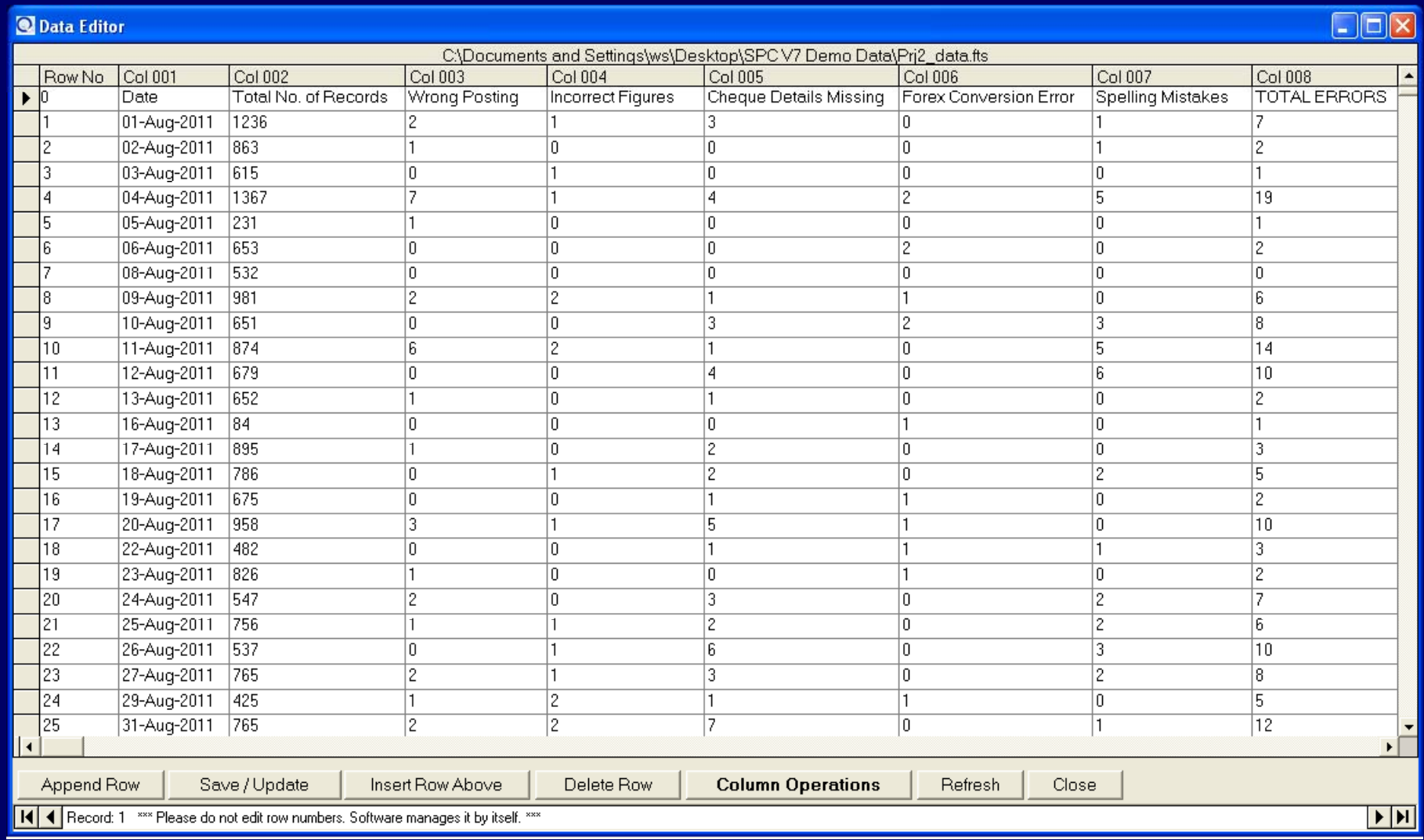
Please see the software screens and read the narrative at the bottom panel.



Example Project (Service Industry)

In a certain company, there were chronic data entry problems in the Accounts Department. As part of its Six Sigma initiatives, the company's management has decided to study the data entry errors by collecting the data for one month and analysing it. The company has designated its Manager, **Mr. Stanley John** as the **Project Leader**.

Mr. John has created a project record by going to the menu item File ➢ Manage My Projects

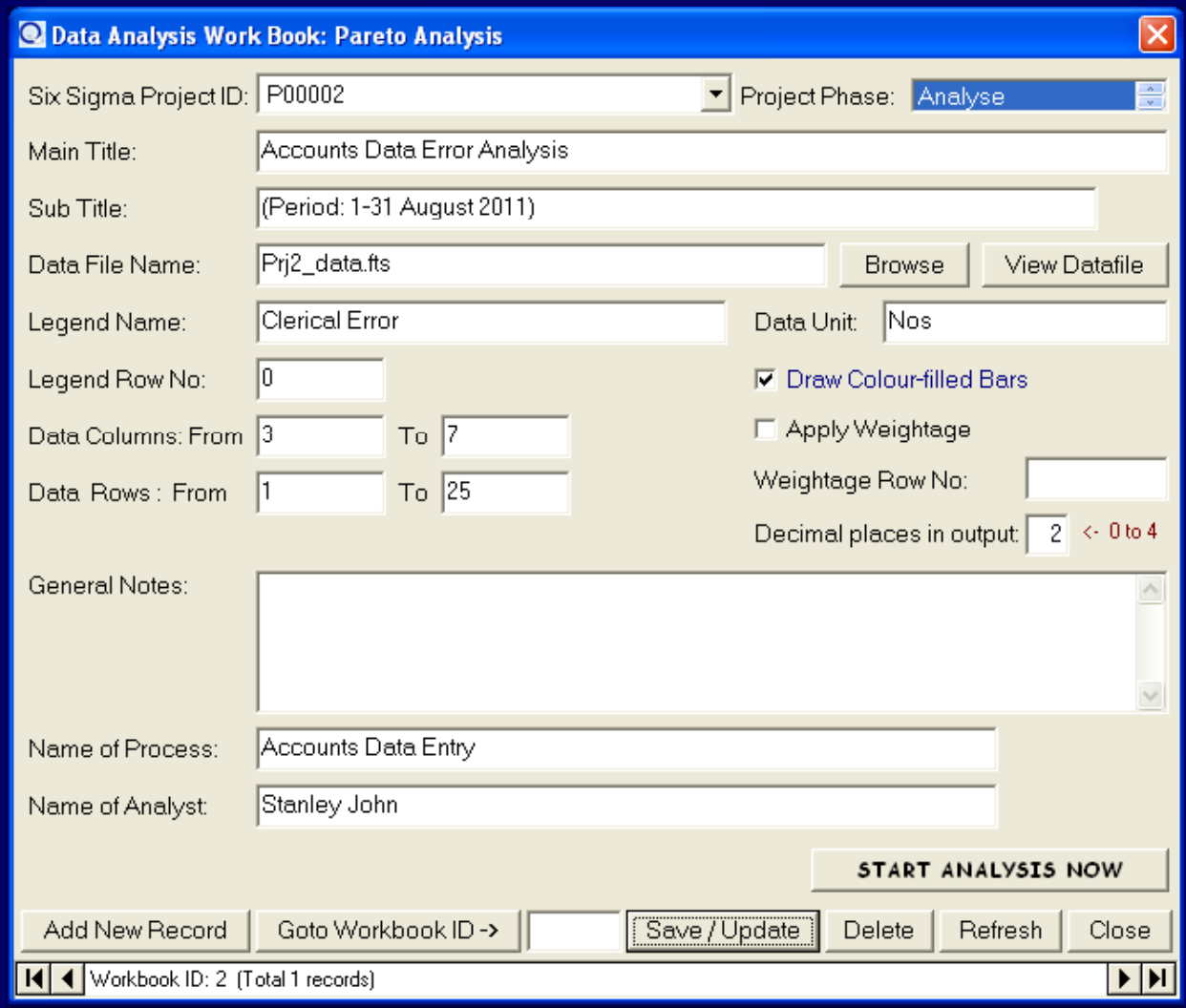


Row No	Col 001	Col 002	Col 003	Col 004	Col 005	Col 006	Col 007	Col 008
0	Date	Total No. of Records	Wrong Posting	Incorrect Figures	Cheque Details Missing	Forex Conversion Error	Spelling Mistakes	TOTAL ERRORS
1	01-Aug-2011	1236	2	1	3	0	1	7
2	02-Aug-2011	863	1	0	0	0	1	2
3	03-Aug-2011	615	0	1	0	0	0	1
4	04-Aug-2011	1367	7	1	4	2	5	19
5	05-Aug-2011	231	1	0	0	0	0	1
6	06-Aug-2011	653	0	0	0	2	0	2
7	08-Aug-2011	532	0	0	0	0	0	0
8	09-Aug-2011	981	2	2	1	1	0	6
9	10-Aug-2011	651	0	0	3	2	3	8
10	11-Aug-2011	874	6	2	1	0	5	14
11	12-Aug-2011	679	0	0	4	0	6	10
12	13-Aug-2011	652	1	0	1	0	0	2
13	16-Aug-2011	84	0	0	0	1	0	1
14	17-Aug-2011	895	1	0	2	0	0	3
15	18-Aug-2011	786	0	1	2	0	2	5
16	19-Aug-2011	675	0	0	1	1	0	2
17	20-Aug-2011	958	3	1	5	1	0	10
18	22-Aug-2011	482	0	0	1	1	1	3
19	23-Aug-2011	826	1	0	0	1	0	2
20	24-Aug-2011	547	2	0	3	0	2	7
21	25-Aug-2011	756	1	1	2	0	2	6
22	26-Aug-2011	537	0	1	6	0	3	10
23	27-Aug-2011	765	2	1	3	0	2	8
24	29-Aug-2011	425	1	2	1	1	0	5
25	31-Aug-2011	765	2	2	7	0	1	12

Example Project (Service Industry)

Then he created a new data file by going to the menu item File ➢ New Data File.

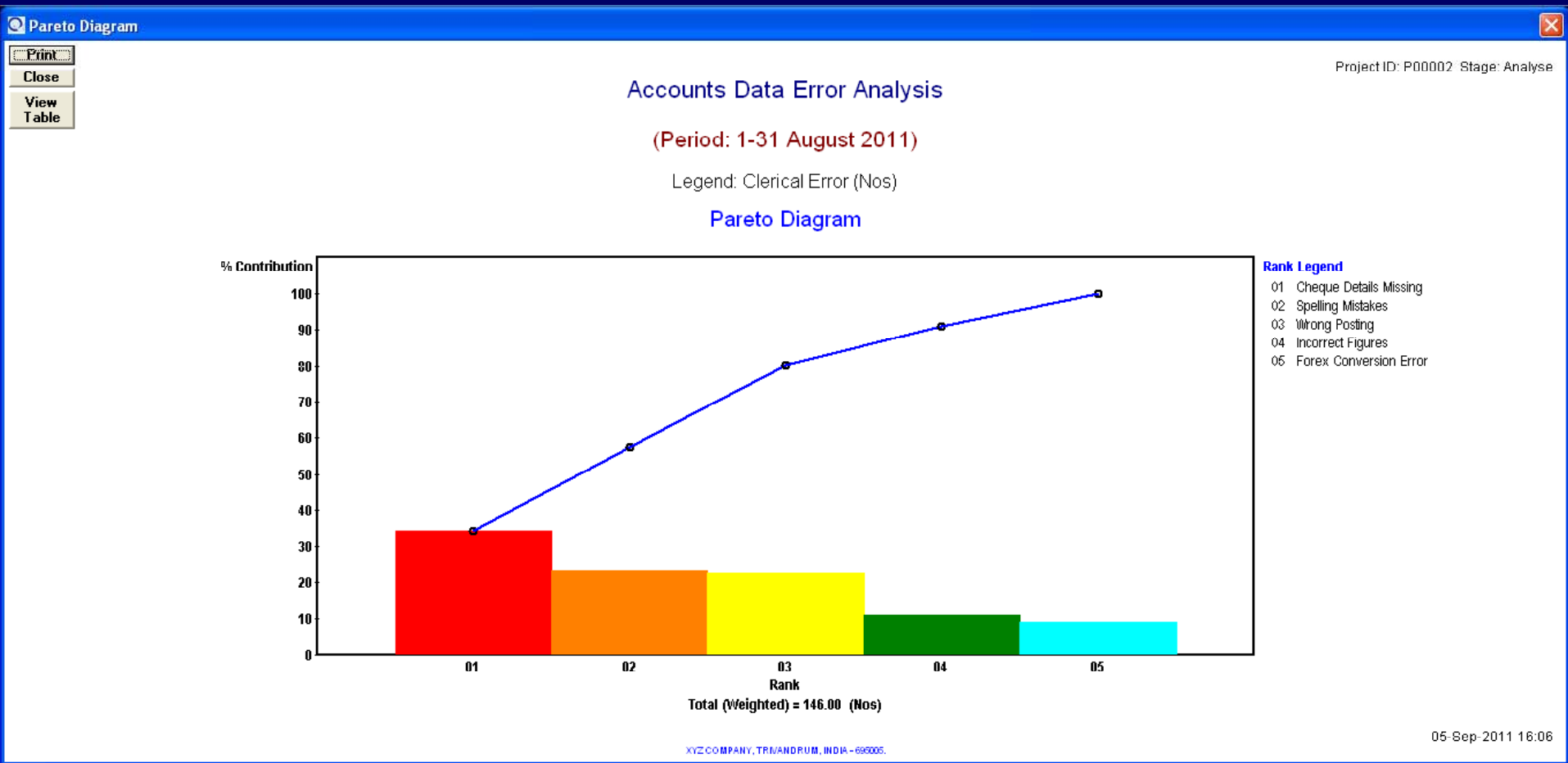
After that, he entered the data collected in August 2011 and saved the file.



Example Project (Service Industry)

Looking at the data, he decided to first carry out a Pareto Analysis.

For this he went to the menu item File ➢ Manage My Workbooks / Start Data Analysis ➢ Pareto Analysis and created a workbook record.



Example Project (Service Industry)

When he clicked on the ‘START ANALYSIS NOW’ button, the software has displayed the Pareto Diagram.

Pareto Table

Print Close

Project ID: P00002 Stage: Analyse

Accounts Data Error Analysis

(Period: 1-31 August 2011)

Legend: Clerical Error (Nos)

Pareto Analysis Table

Rank	Legend Name	Legend Total	Weightage	Wtd. Total	Contribution %	Cumulative %
01	Cheque Details Missing	50.00	1.00	50.00	34.25	34.25
02	Spelling Mistakes	34.00	1.00	34.00	23.29	57.53
03	Wrong Posting	33.00	1.00	33.00	22.60	80.14
04	Incorrect Figures	16.00	1.00	16.00	10.96	91.10
05	Forex Conversion Error	13.00	1.00	13.00	8.90	100.00
	GRAND TOTALS :	**146.00**		**146.00**	**100.00**	

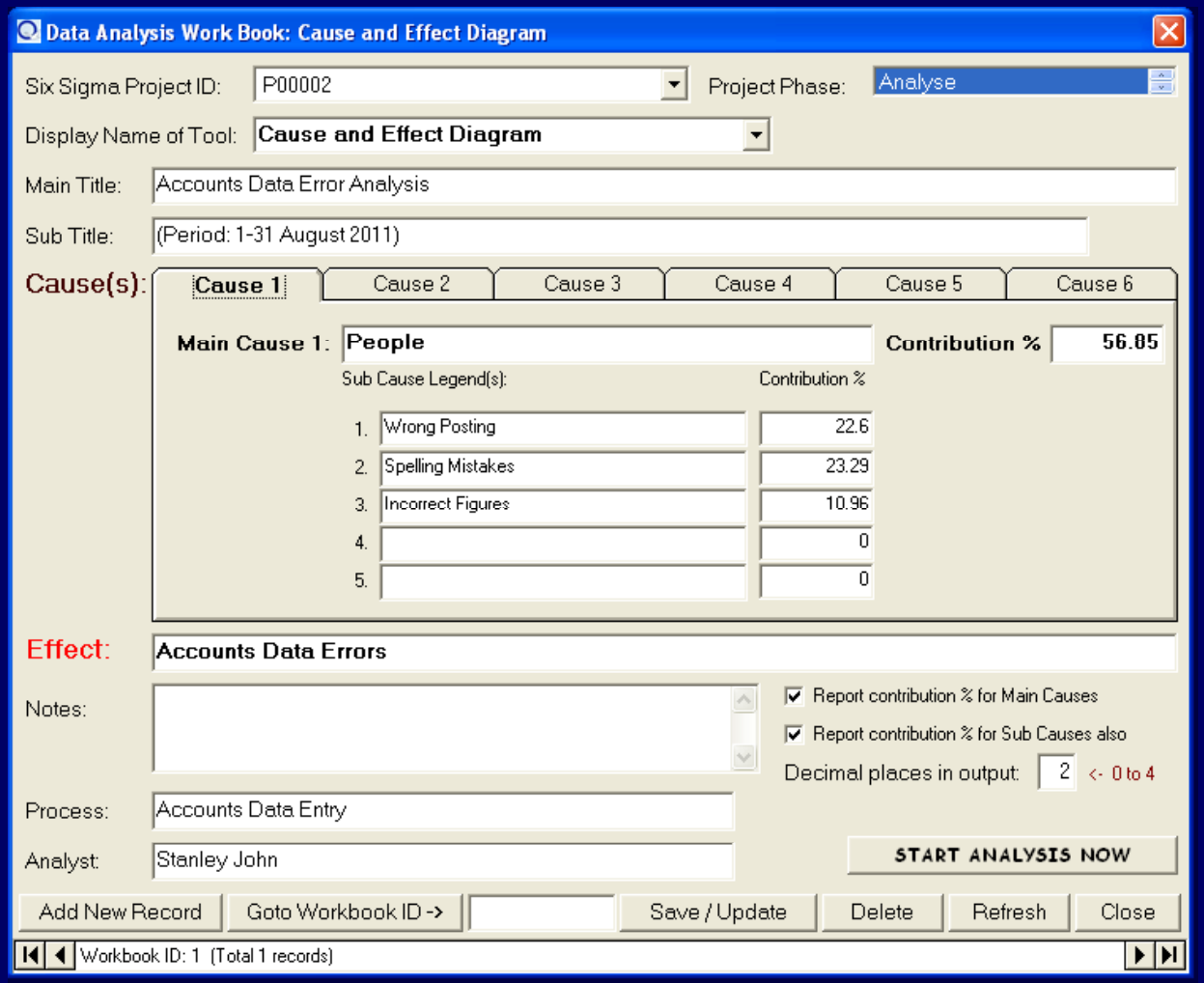
05-Sep-2011 16:08

XYZ COMPANY, TRIVANDRUM, INDIA - 695005.

Example Project (Service Industry)

And, when he clicked on the 'View Table' button, the Pareto Table was shown as above.

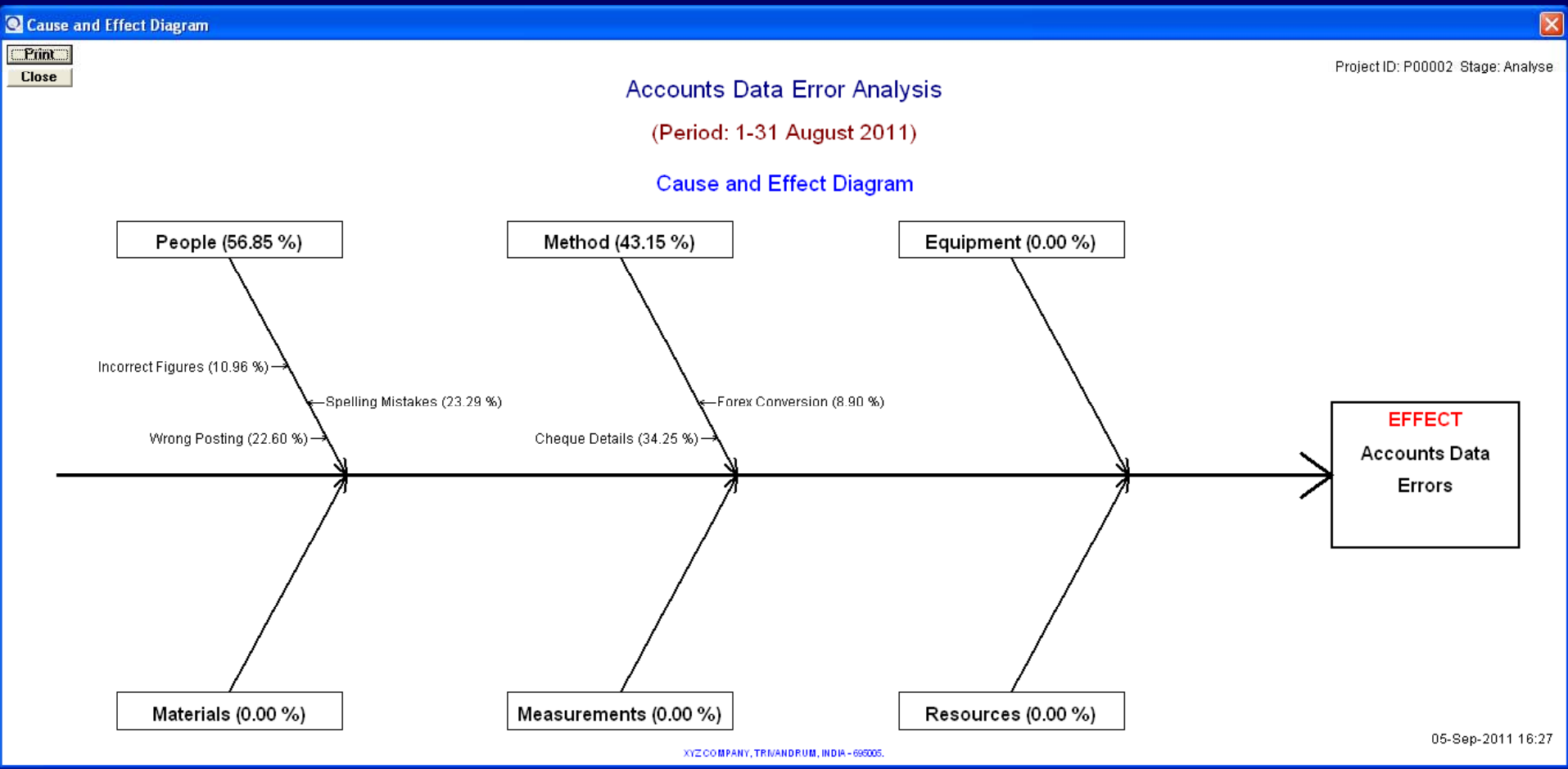
He has decided to present this Pareto output along with a Cause & Effect Diagram to the concerned data entry operators for further brainstorming and improvement.



Example Project (Service Industry)

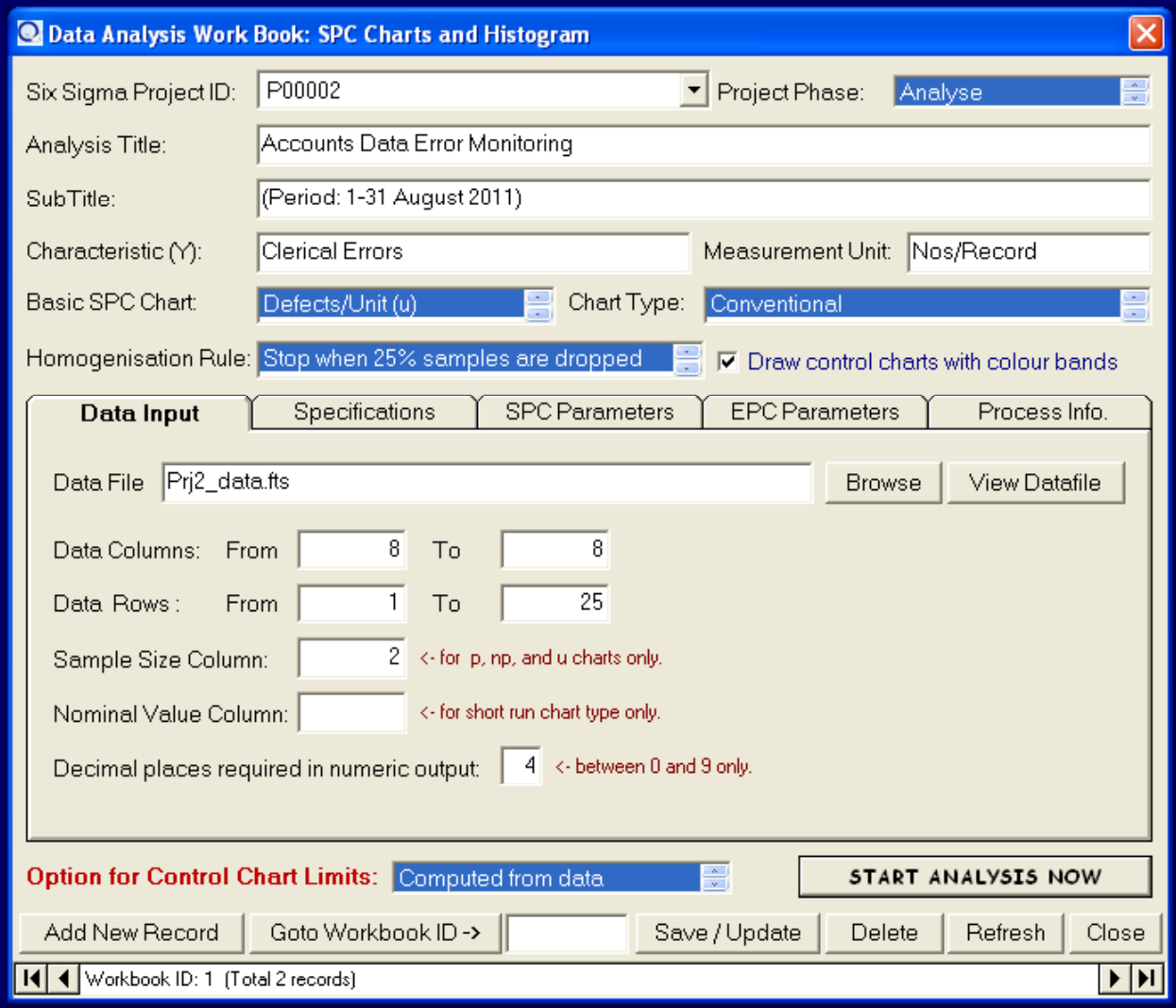
He has also decided to group the errors under six categories (variation of Six M's) such as **People**, **Method**, **Equipment**, **Resources**, **Measurements**, and, **Materials**.

He went to the menu item File ➢ Manage My Workbooks / Start Data Analysis ➢ Cause and Effect Diagram and created a workbook record.



Example Project (Service Industry)

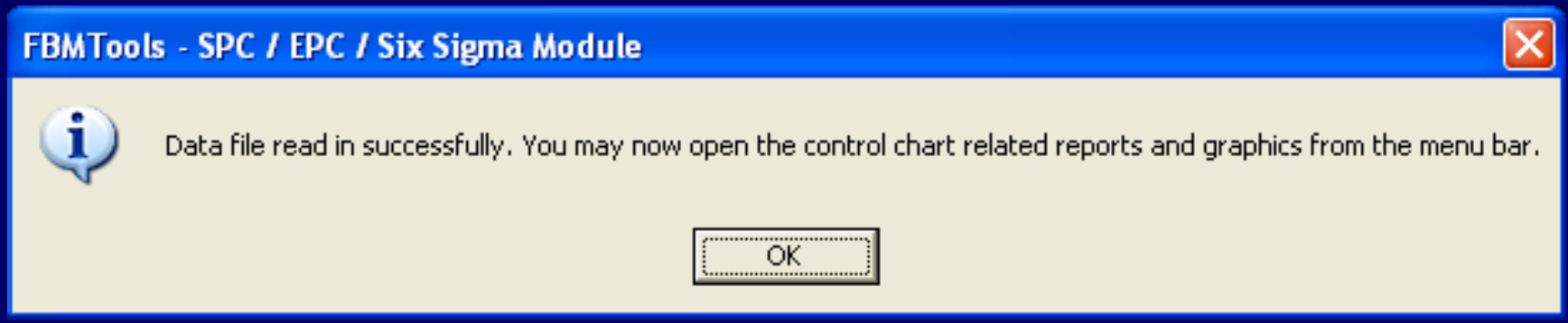
When he clicked on the ‘START ANALYSIS NOW’ button, the software has displayed the Cause & Effect Diagram.



Example Project (Service Industry)

Also, the project leader wanted to get an estimate of the current levels of *Six Sigma Metrics* of the data entry process. For this, he has decided to open a control chart workbook and use the u-chart.

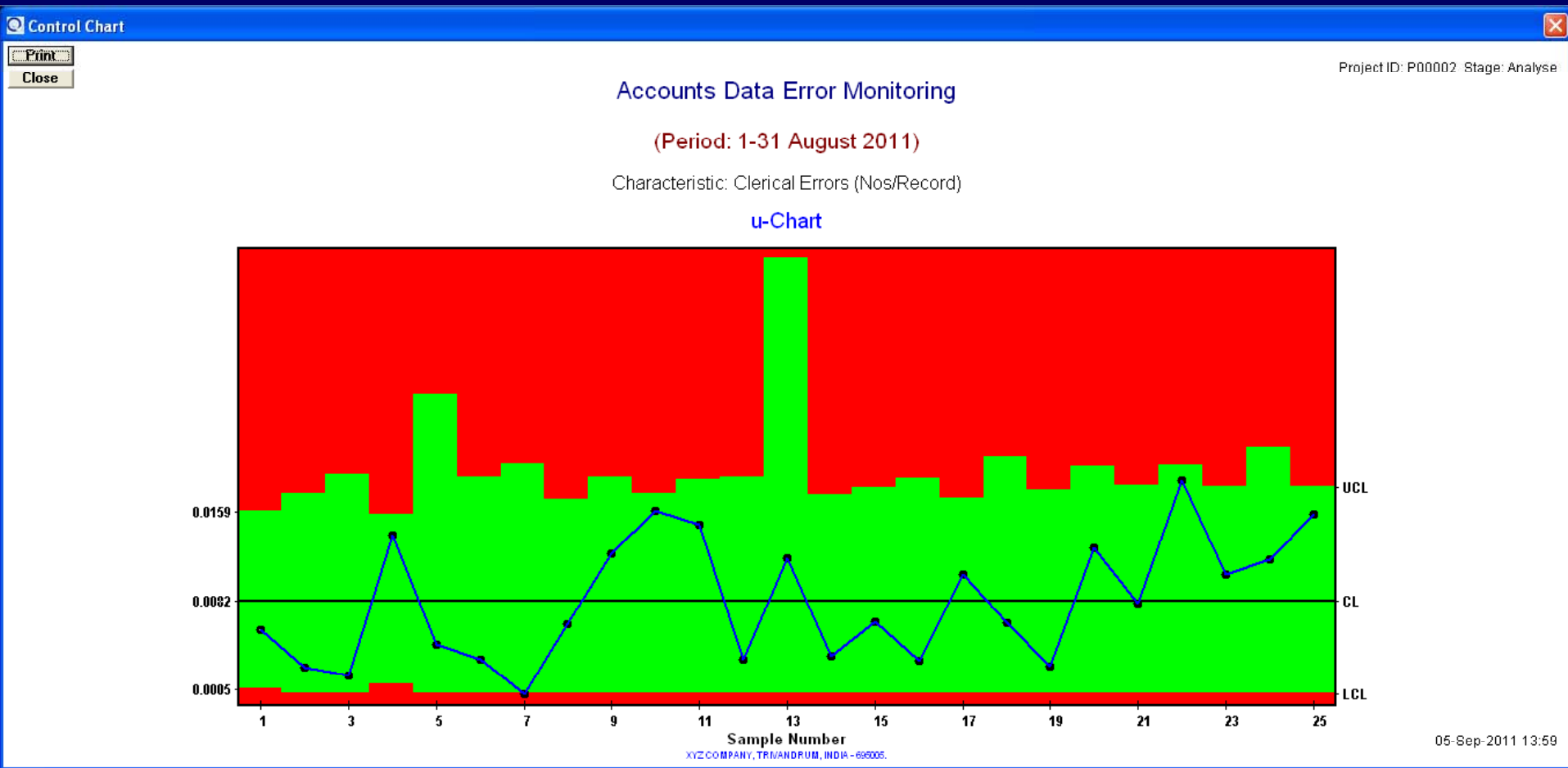
To setup u-chart, the project leader has gone to the menu item File ➢ Manage My Workbooks / Start Data Analysis ➢ Control Chart and Histogram and created a workbook record.



Example Project (Service Industry)

When he clicked on the ‘START ANALYSIS NOW’ button, the software has displayed the above message.

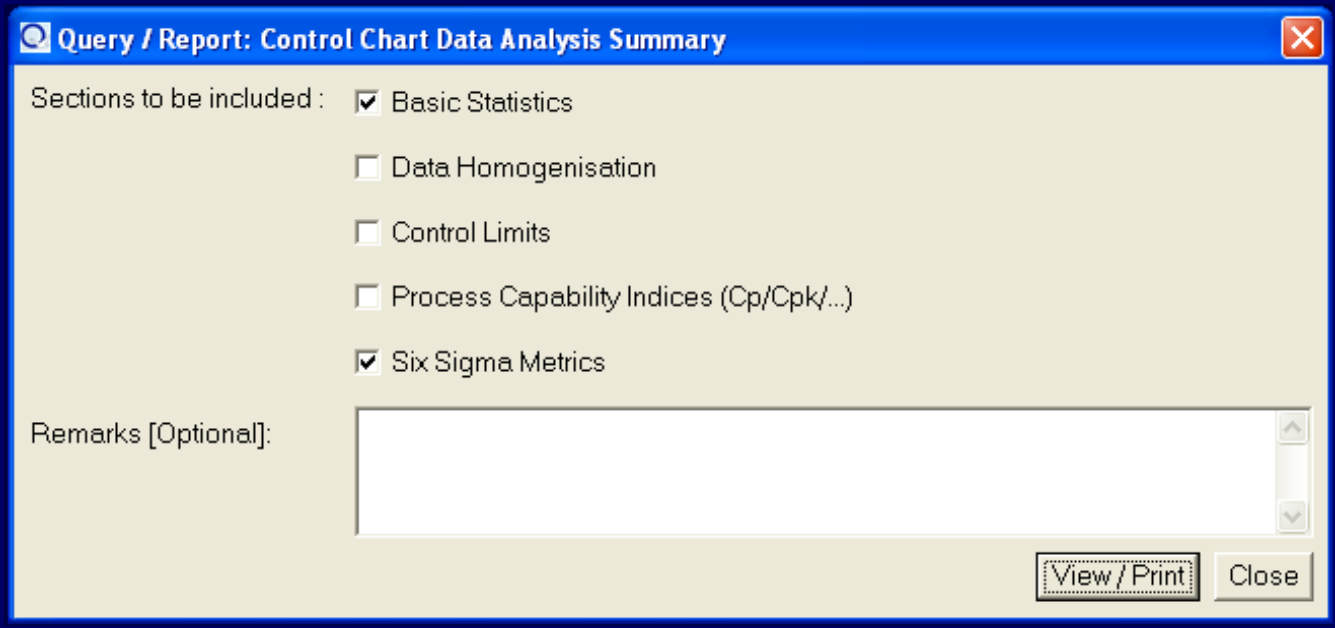
To view the control chart, he has gone to the menu item Graphics ➢ Control Charts and clicked open the menu.



Example Project (Service Industry)

The following control chart (u-chart) was displayed.

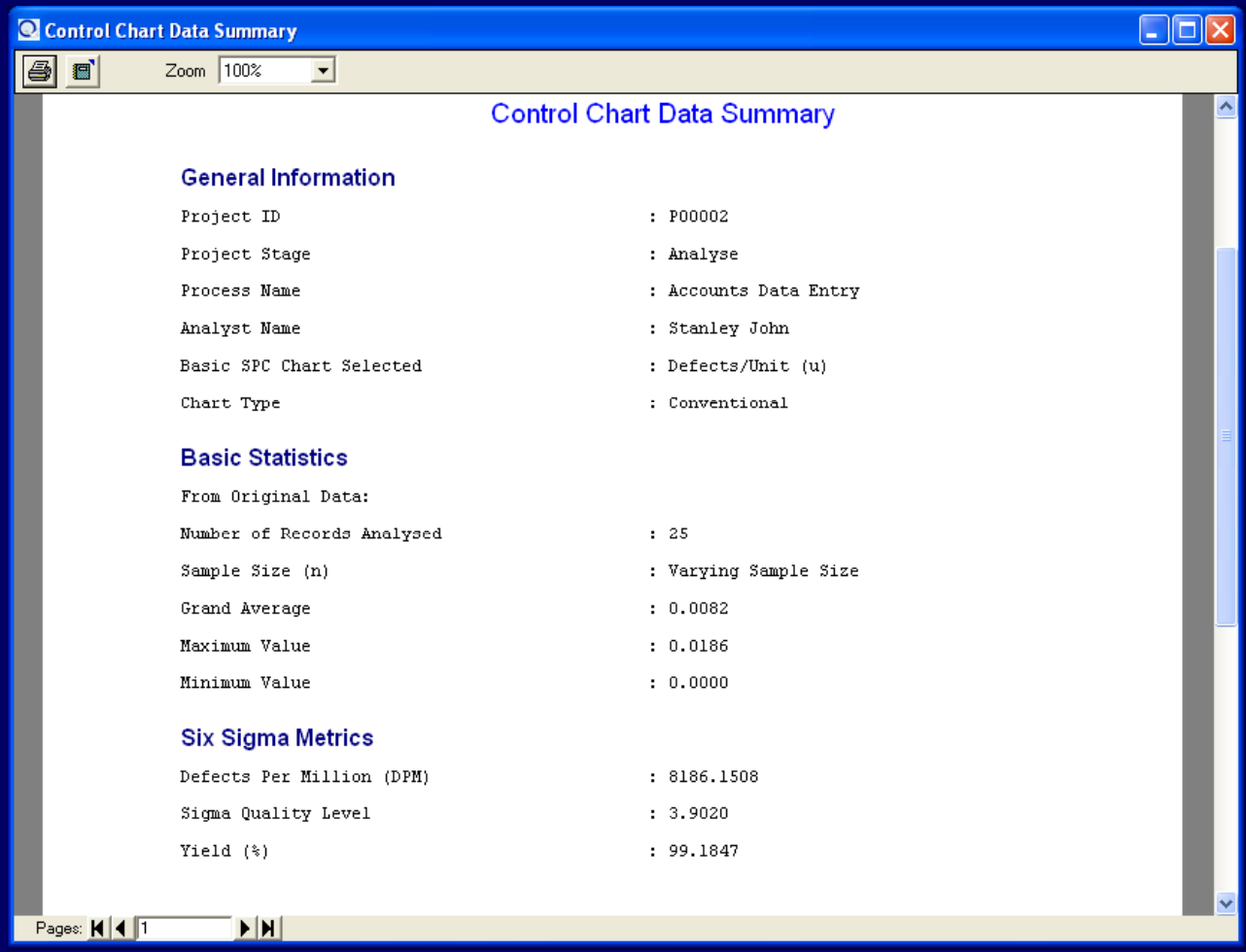
As the sample sizes were varying, the chart was drawn with varying control limits (not as straight lines). Areas within control limits shown in green colour, and areas outside limits in red colour.



Example Project (Service Industry)

To view the Six Sigma metrics, he has gone to the menu item Reports ➢ Control Chart Data Summary and clicked open the menu as above.

After checking the required sections in the report, he hit the ‘View/Print’ button to view the report.



Example Project (Service Industry)

Having done the preliminary data analysis, it is now time for brainstorming and improvement.

Example Project (Service Industry)

Brain Storming & Improvement:

Looking at the Pareto Analysis, Cause & Effect Diagram, and the Control Chart, the data entry operators as well as the project leader agreed that the root causes of the problem were:

1. **People** (Human errors – spelling mistakes and wrong postings), and

2. **Method** (Procedural flaws in communicating cheque details)

It was decided …

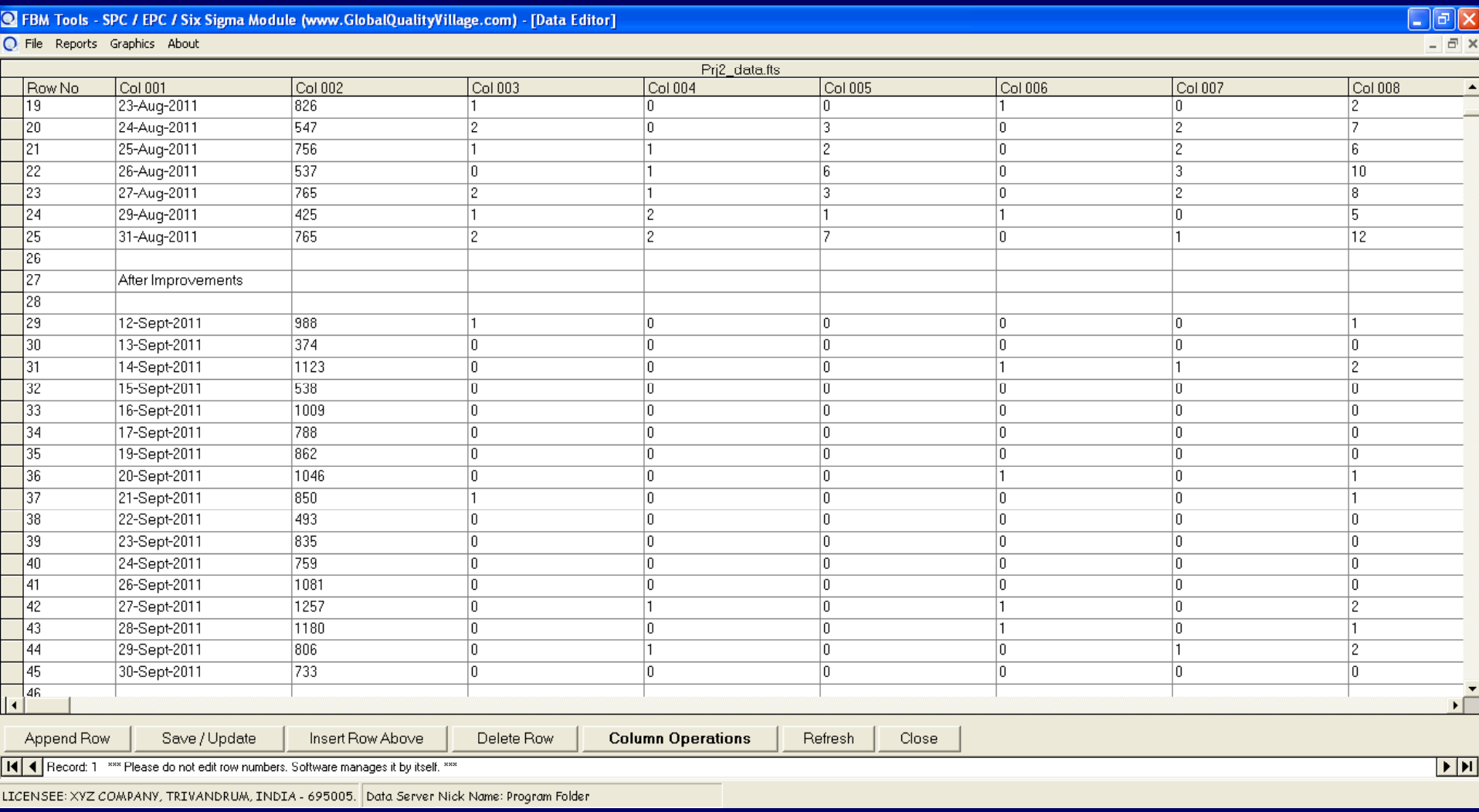
- to impart training to all data entry operators on accounting concepts (correct posting)

- to enable automatic spell-check facility of the accounting software, and also to keep dictionary CDs at data entry work stations

- to re-write the integrated management system (IMS) work instructions in such a way that cheque details would never be lost in the communication process, and

- to continue with the u-chart for monitoring the day-to-day error levels.

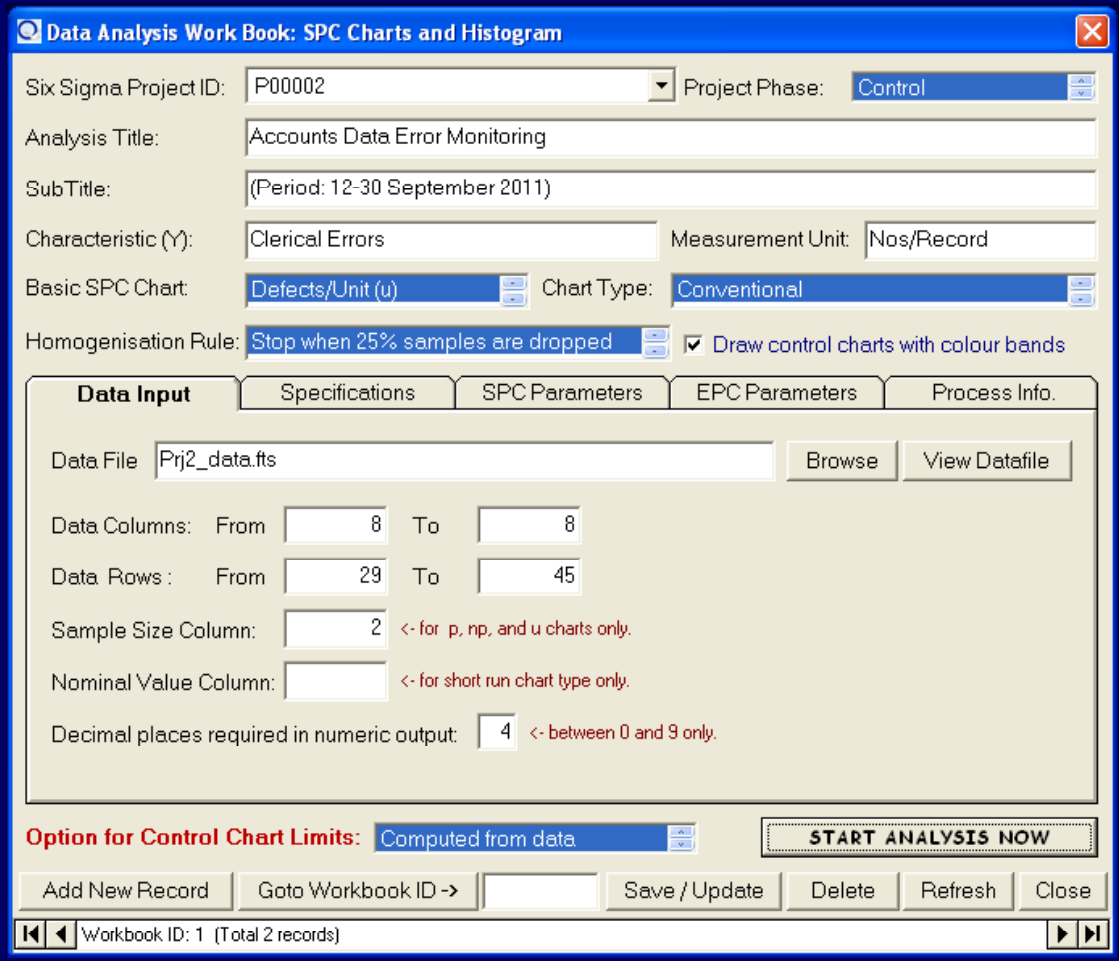
Let's see what was the result of implementing the corrective actions:



Row No	Col 001	Col 002	Col 003	Col 004	Col 005	Col 006	Col 007	Col 008
19	23-Aug-2011	826	1	0	0	1	0	2
20	24-Aug-2011	547	2	0	3	0	2	7
21	25-Aug-2011	756	1	1	2	0	2	6
22	26-Aug-2011	537	0	1	6	0	3	10
23	27-Aug-2011	765	2	1	3	0	2	8
24	29-Aug-2011	425	1	2	1	1	0	5
25	31-Aug-2011	765	2	2	7	0	1	12
26								
27	After Improvements							
28								
29	12-Sept-2011	988	1	0	0	0	0	1
30	13-Sept-2011	374	0	0	0	0	0	0
31	14-Sept-2011	1123	0	0	0	1	1	2
32	15-Sept-2011	538	0	0	0	0	0	0
33	16-Sept-2011	1009	0	0	0	0	0	0
34	17-Sept-2011	788	0	0	0	0	0	0
35	19-Sept-2011	862	0	0	0	0	0	0
36	20-Sept-2011	1046	0	0	0	1	0	1
37	21-Sept-2011	850	1	0	0	0	0	1
38	22-Sept-2011	493	0	0	0	0	0	0
39	23-Sept-2011	835	0	0	0	0	0	0
40	24-Sept-2011	759	0	0	0	0	0	0
41	26-Sept-2011	1081	0	0	0	0	0	0
42	27-Sept-2011	1257	0	1	0	1	0	2
43	28-Sept-2011	1180	0	0	0	1	0	1
44	29-Sept-2011	806	0	1	0	0	1	2
45	30-Sept-2011	733	0	0	0	0	0	0
46								

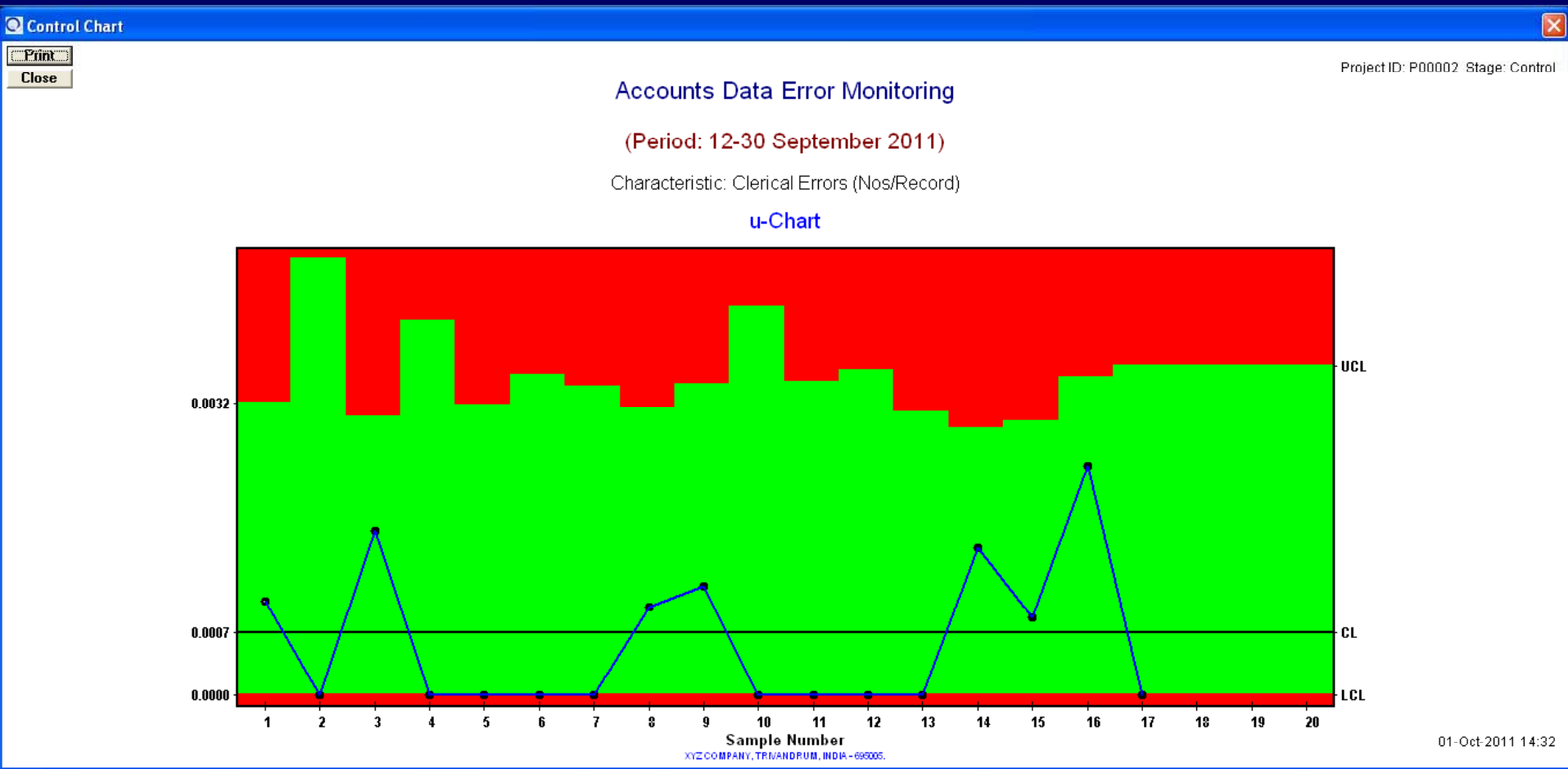
Example Project (Service Industry)

See the freshly collected data for September 2011.



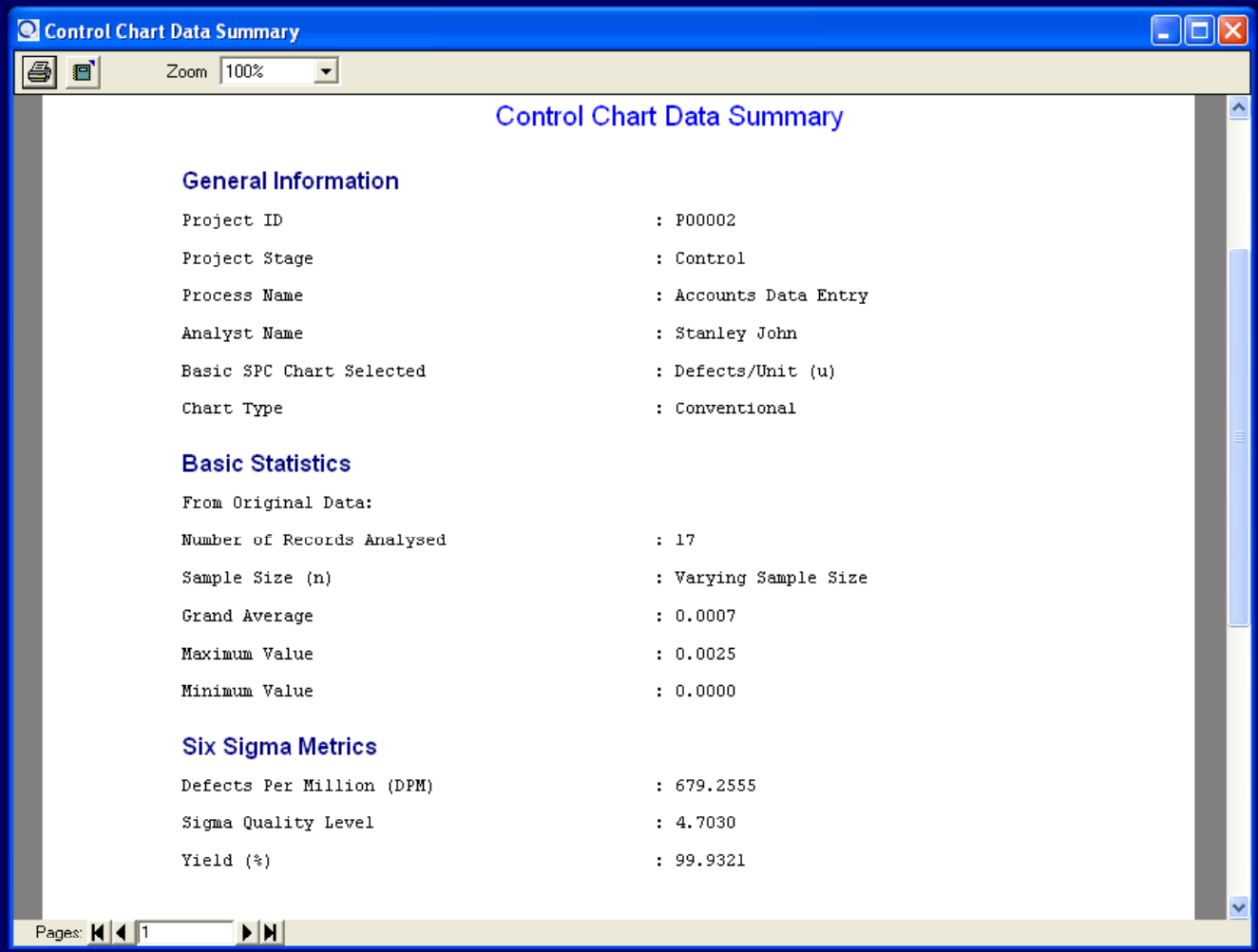
Example Project (Service Industry)

See the (modified) workbook entries for u-chart.



Example Project (Service Industry)

See the u-chart for September 2011.



Example Project (Service Industry)

See the improved Six Sigma Metrics for September 2011. Prior to Six Sigma initiatives, these were:

Defects per Million (DPM) : 8186.15
Sigma Quality Level : 3.90
Yield (%) : 99.18

Hope that you liked the sample project from service industry.

Now, let’s see one example project from manufacturing industry.

Example Project (Manufacturing Industry)

The following tools are covered in this example:

- Control Chart (Variable Data)

- Scatter Plot & Regression

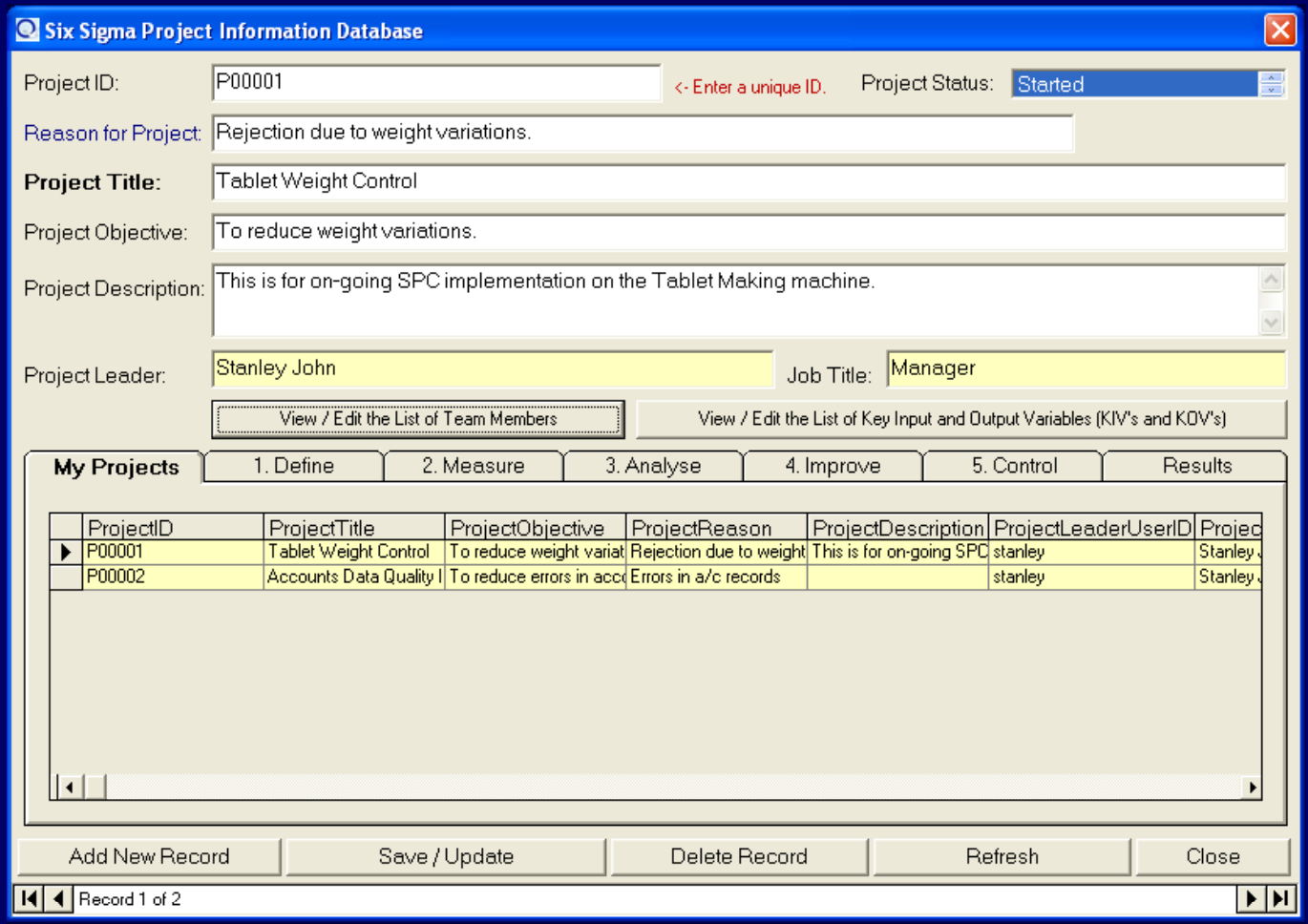
- Engineering Process Control (EPC)

Project Description:

In a certain pharmaceutical company that manufactures tablets, there was frequent rejection of final product due to off-the-spec tablet weight. As part of its Six Sigma initiatives, the company's management decided to study the tablet weight variations by collecting some data from the plant and analysing it.

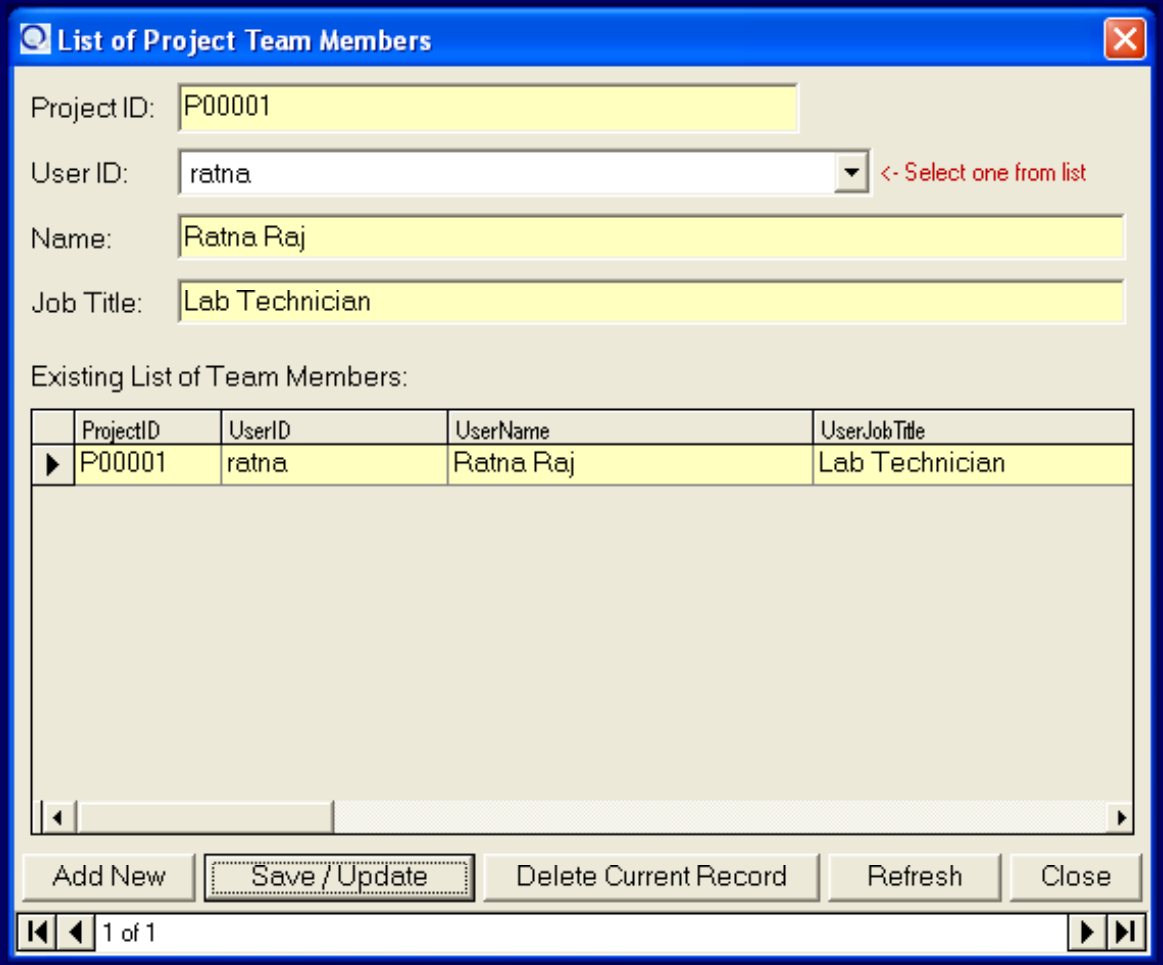
The company has designated its Manager, **Mr. Stanley John** as the Project Leader and the Laboratory Technician **Ms. Ratna Raj** as team member.

Now, let's see how this very interesting project was executed.



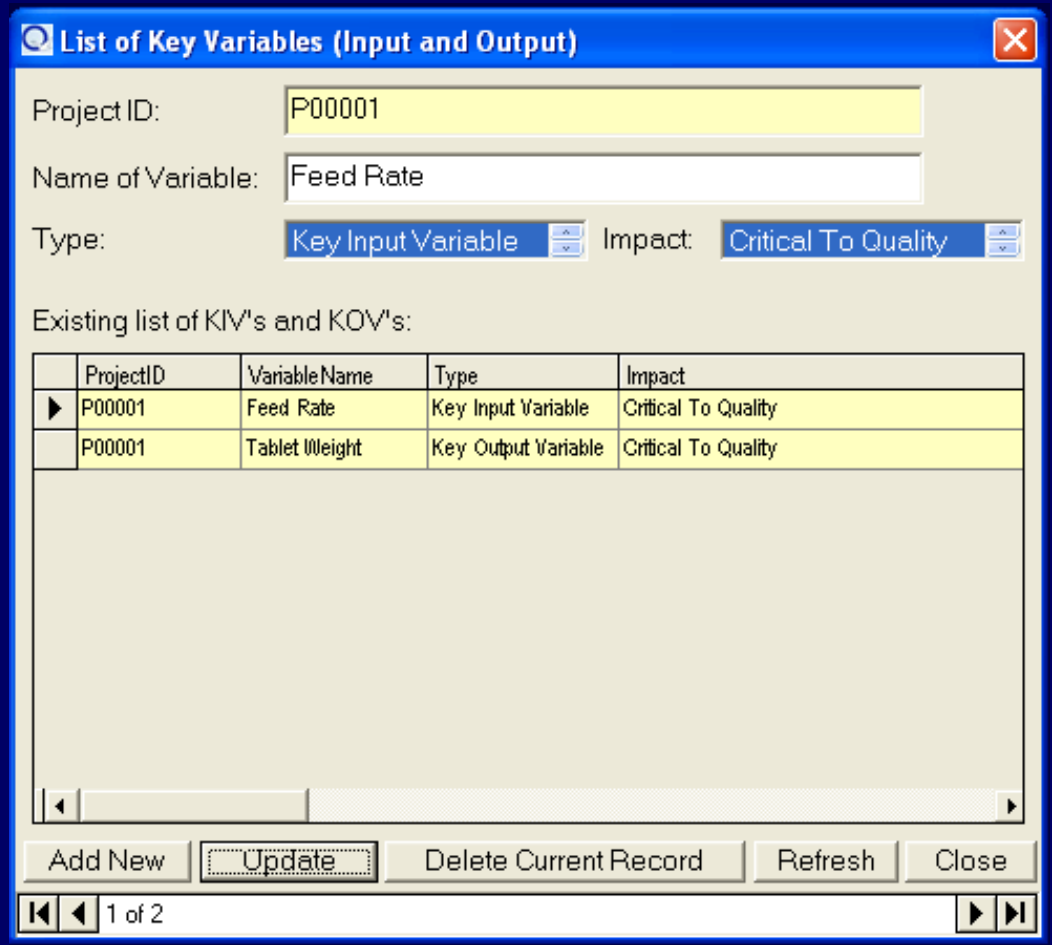
Example Project (Manufacturing Industry)

As the first step, the project leader has created a project record by going to the menu item File ➢ Manage My Project Records



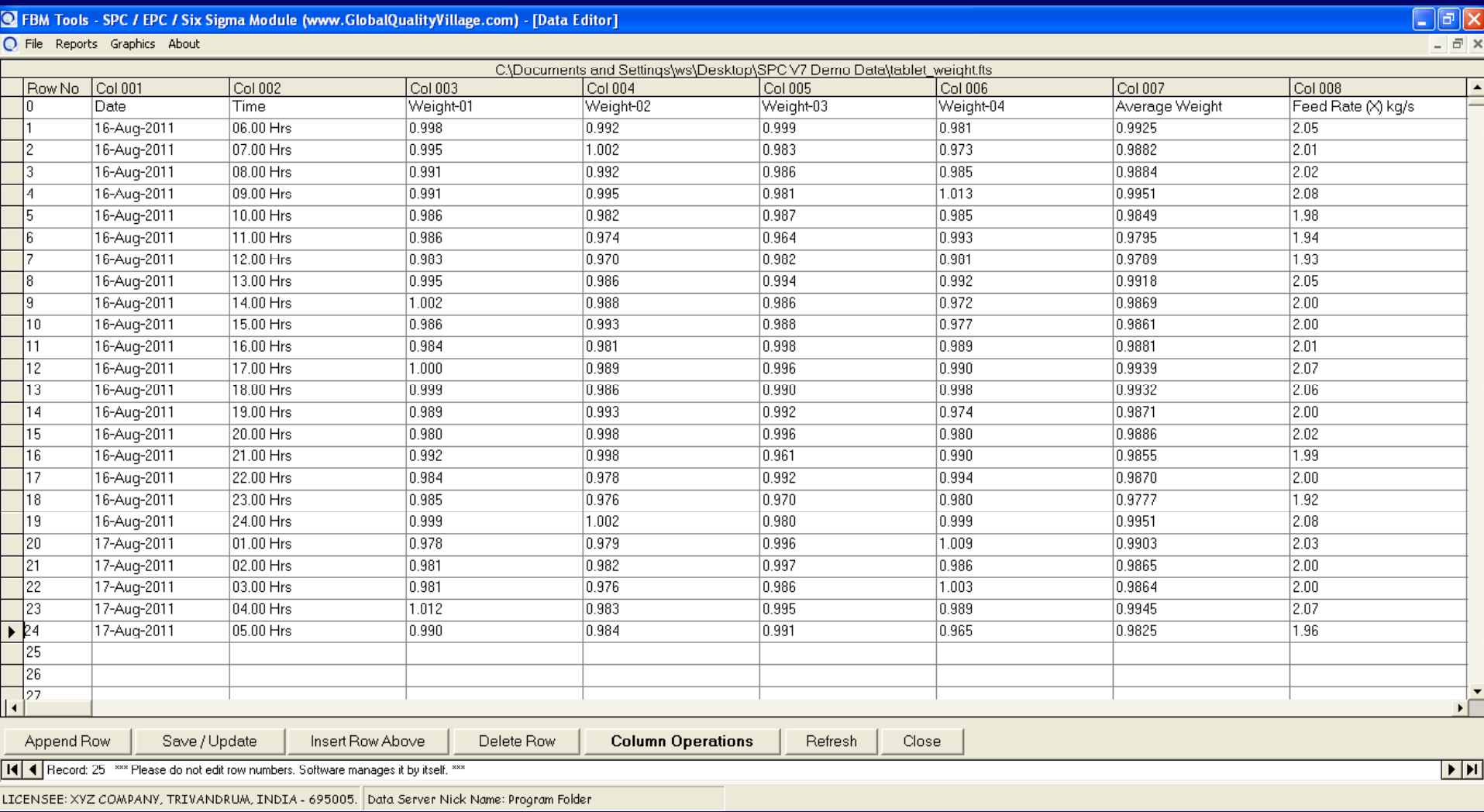
Example Project (Manufacturing Industry)

Then, he entered the team information by clicking on the ‘View / Edit the List of Team Members’ button.



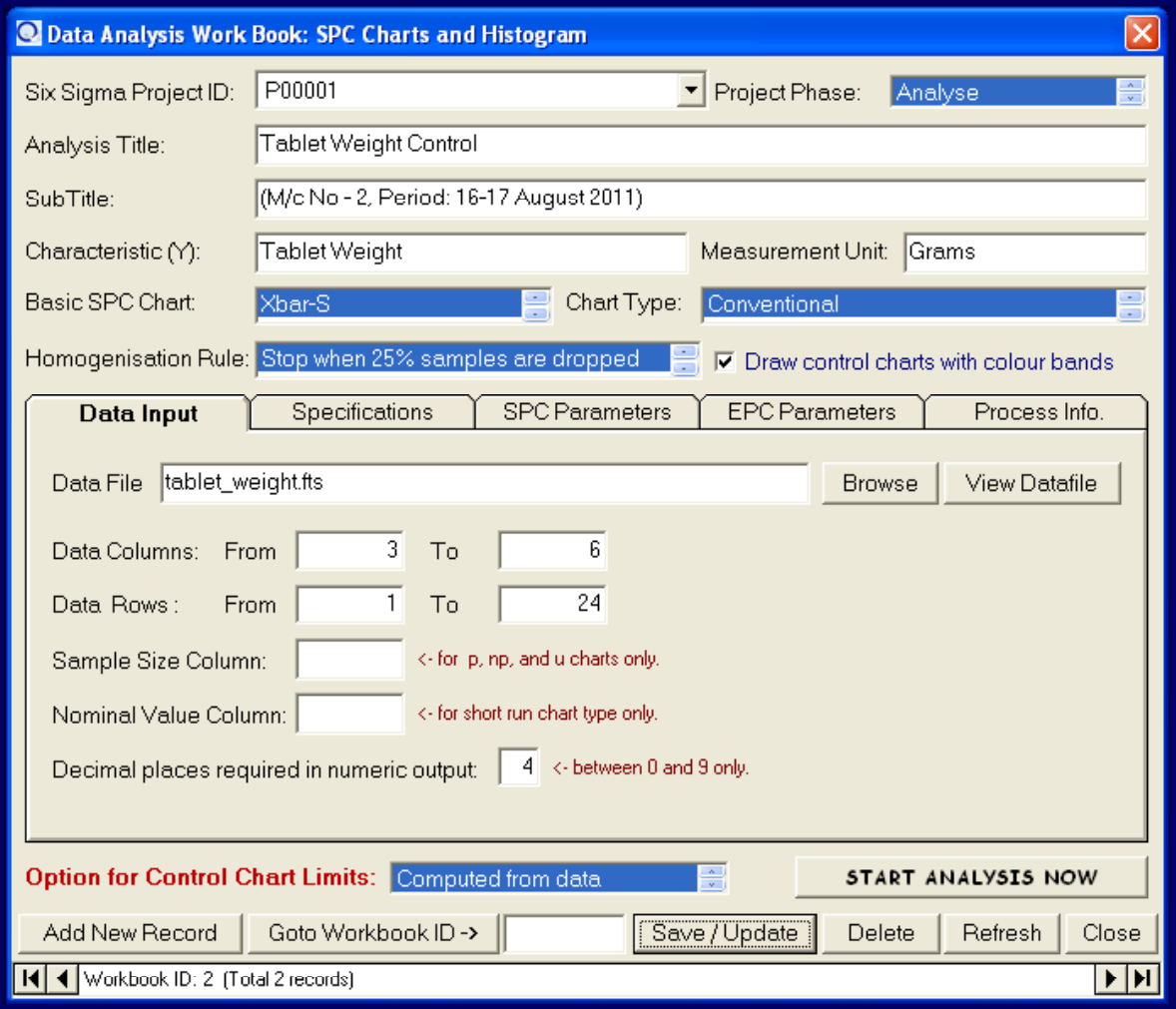
Example Project (Manufacturing Industry)

After that, he entered the key input and output variables by clicking on the ‘View / Edit the List of Key Input and Output Variables (KIV’s and KOV’s)’ button.



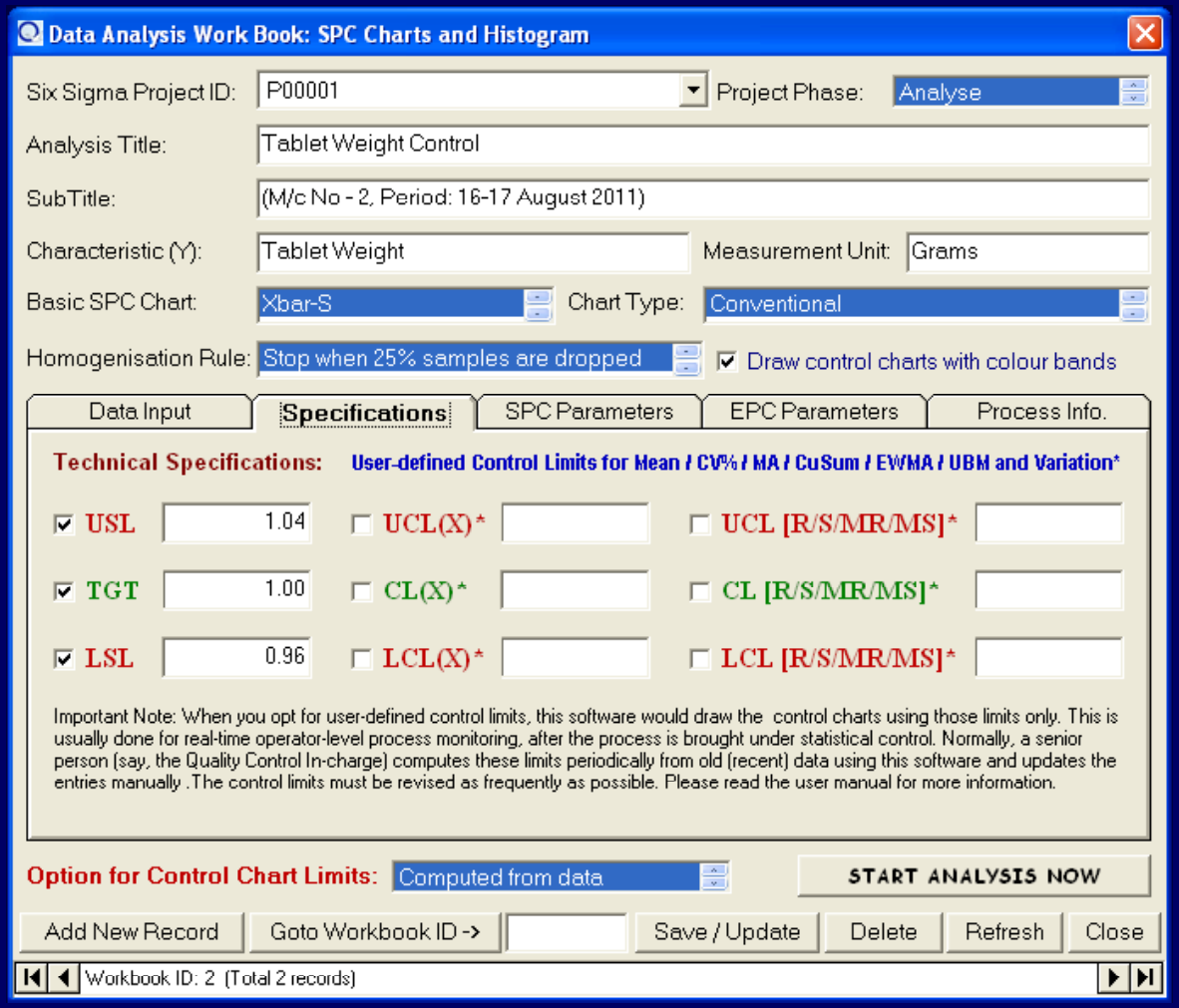
Example Project (Manufacturing Industry)

Then he created a data file and entered the data that was collected with the help of team member.



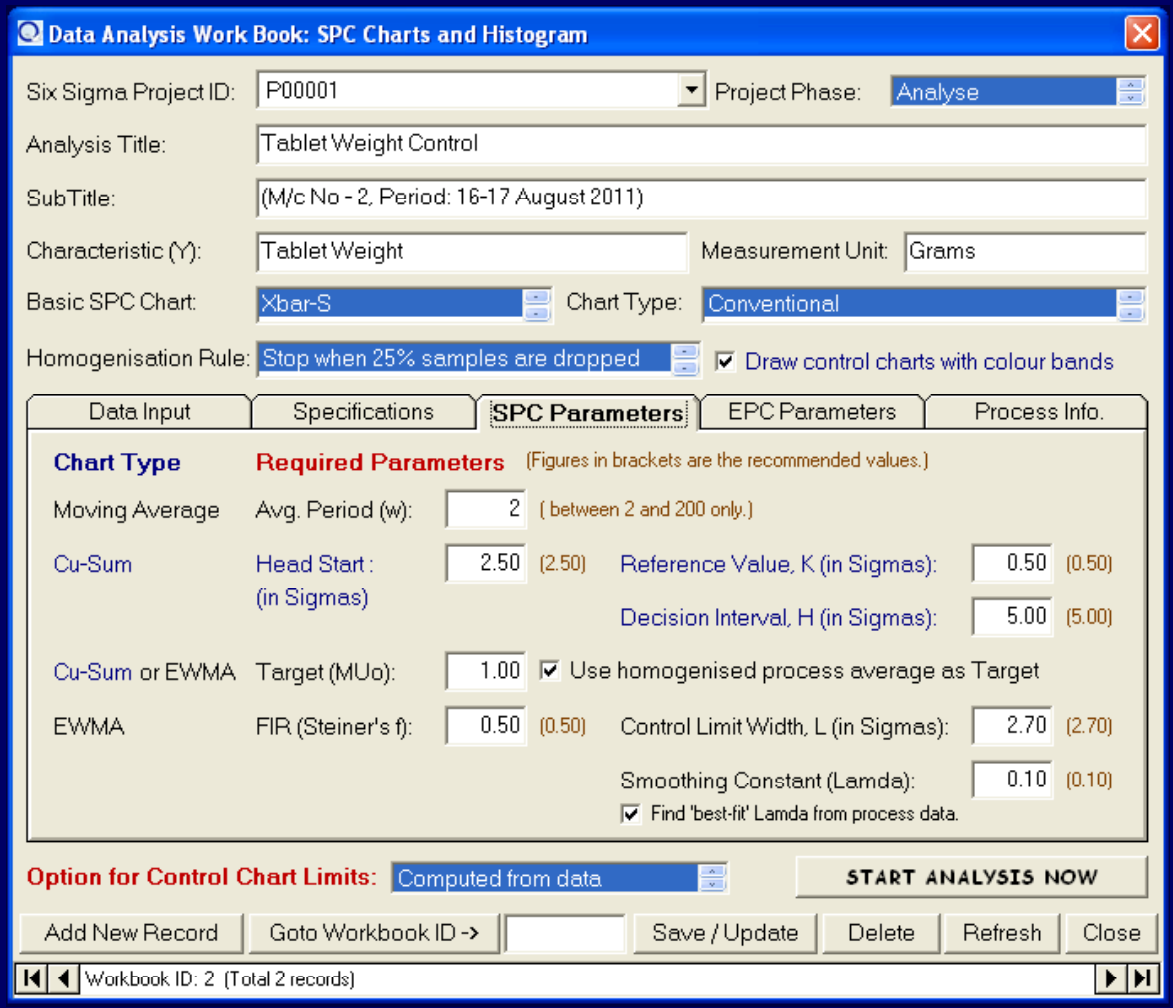
Example Project (Manufacturing Industry)

After that he has created a workbook record for control chart.



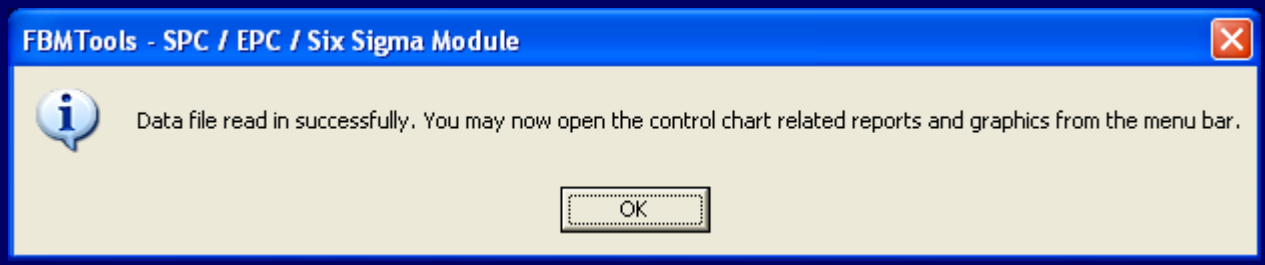
Example Project (Manufacturing Industry)

He has then added details under ‘Specifications’ tab.



Example Project (Manufacturing Industry)

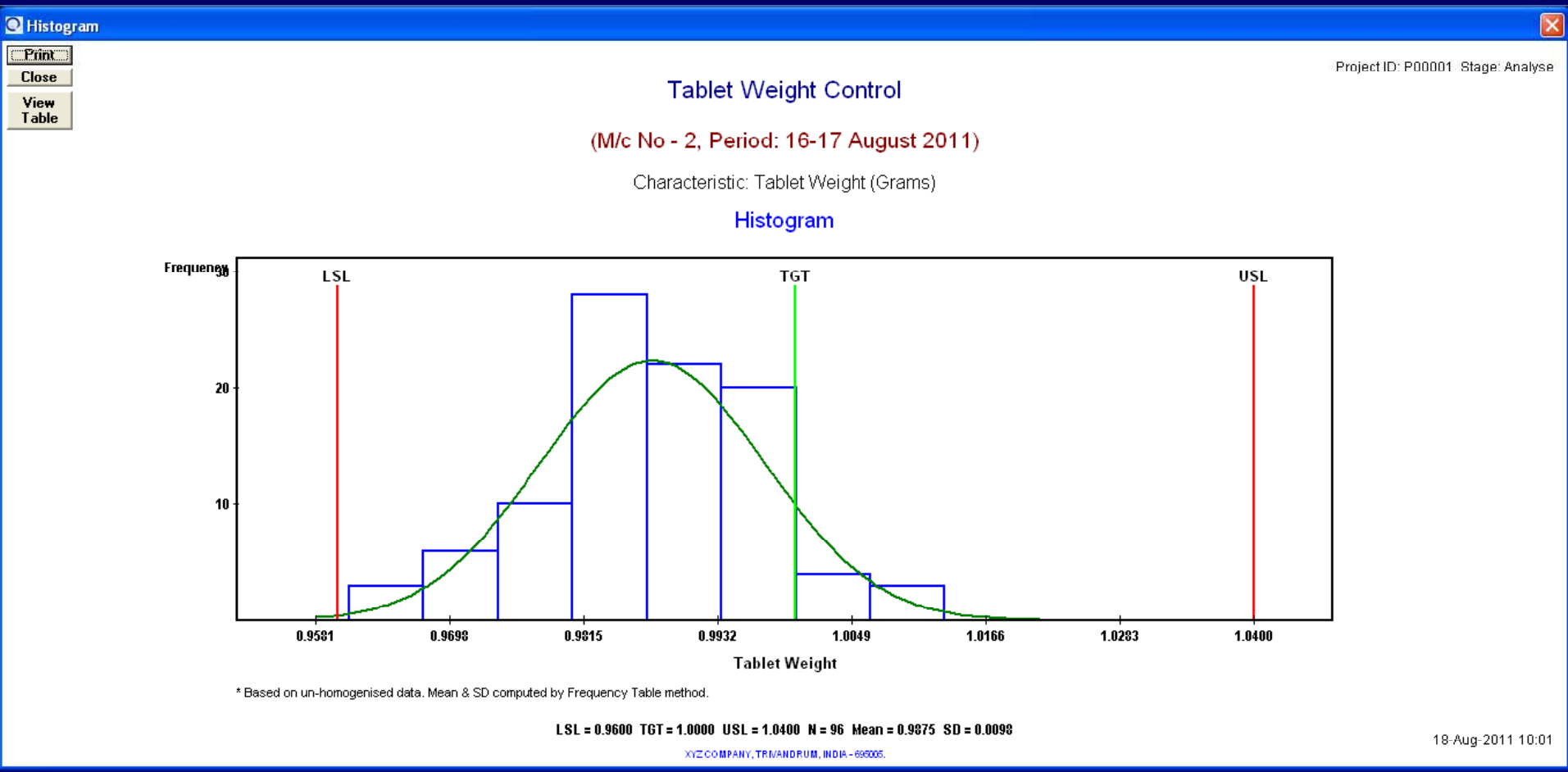
He has then looked at ‘SPC Parameters’ tab and just made one entry (Target = 1.00) and kept all others at default values. As the basic chart selected was Xbar-S and chart type selected was ‘Conventional’, these parameters were not required. Regarding ‘EPC Parameters’ tab, he decided to enter the details at a later stage (after analysing the data using Scatter Plot and Regression tool).



Example Project (Manufacturing Industry)

He then clicked on the ‘START ANALYSIS NOW’ button, and received the above message.

Now, he decided to see the graphs first.



Example Project (Manufacturing Industry)

Histogram, depicting the data distribution (spread) viz-a-viz tolerance band (technical specifications).

Frequency Table

Print Close

Project ID: P00001 Stage: Analyse

Tablet Weight Control

(M/c No - 2, Period: 16-17 August 2011)

Characteristic: Tablet Weight (Grams)

Frequency Table

Class	>= LB	< UB	Mid Value	Frequency
1	0.9610	0.9675	0.9643	3
2	0.9675	0.9740	0.9708	6
3	0.9740	0.9805	0.9773	10
4	0.9805	0.9870	0.9838	28
5	0.9870	0.9935	0.9903	22
6	0.9935	1.0000	0.9968	20
7	1.0000	1.0065	1.0033	4
8	1.0065	1.0130	1.0098	3

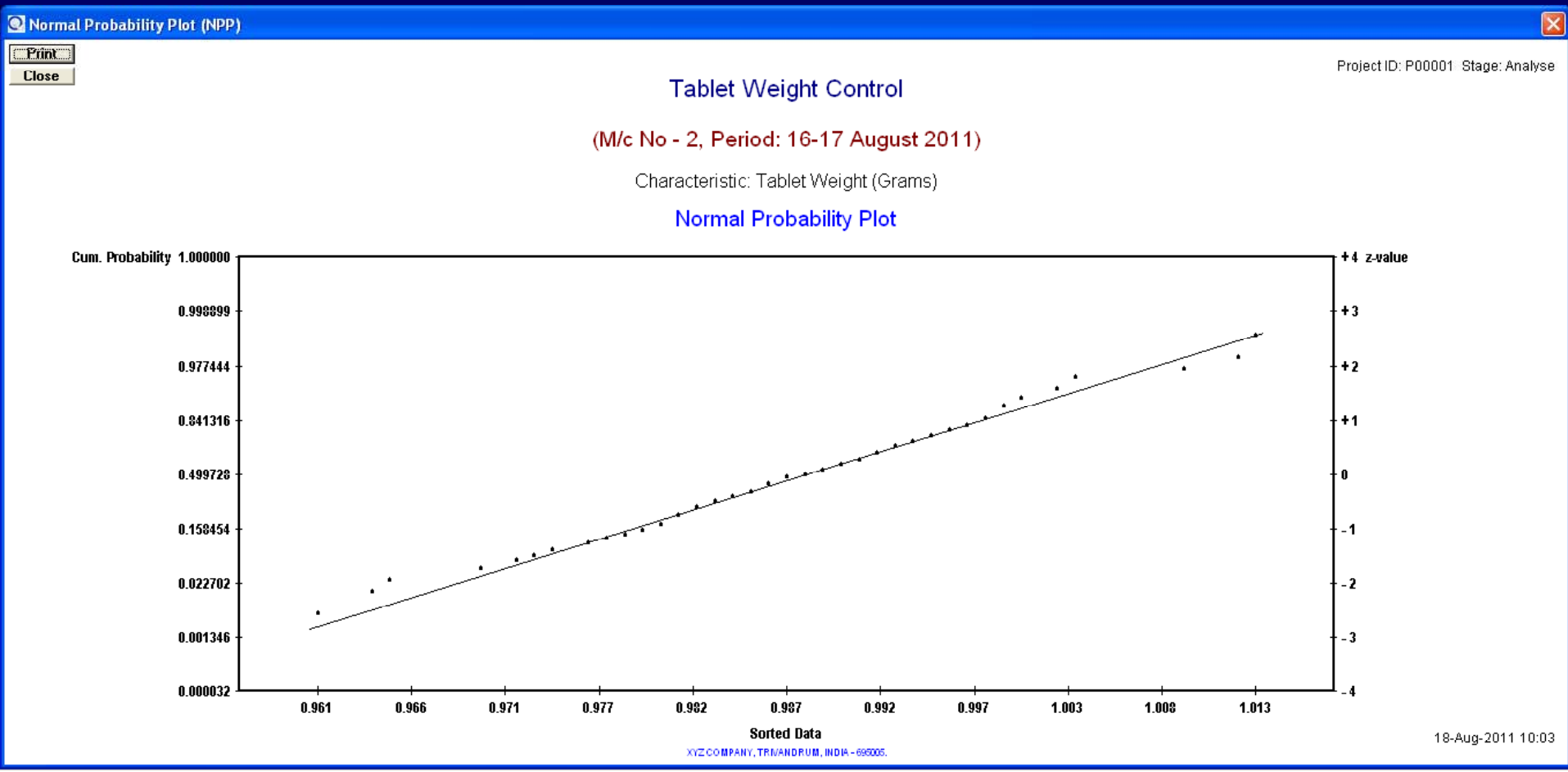
Mean = 0.9875 Standard Deviation = 0.0098 N = 96

18-Aug-2011 10:02

XYZ COMPANY, TRIVANDRUM, INDIA - 695005.

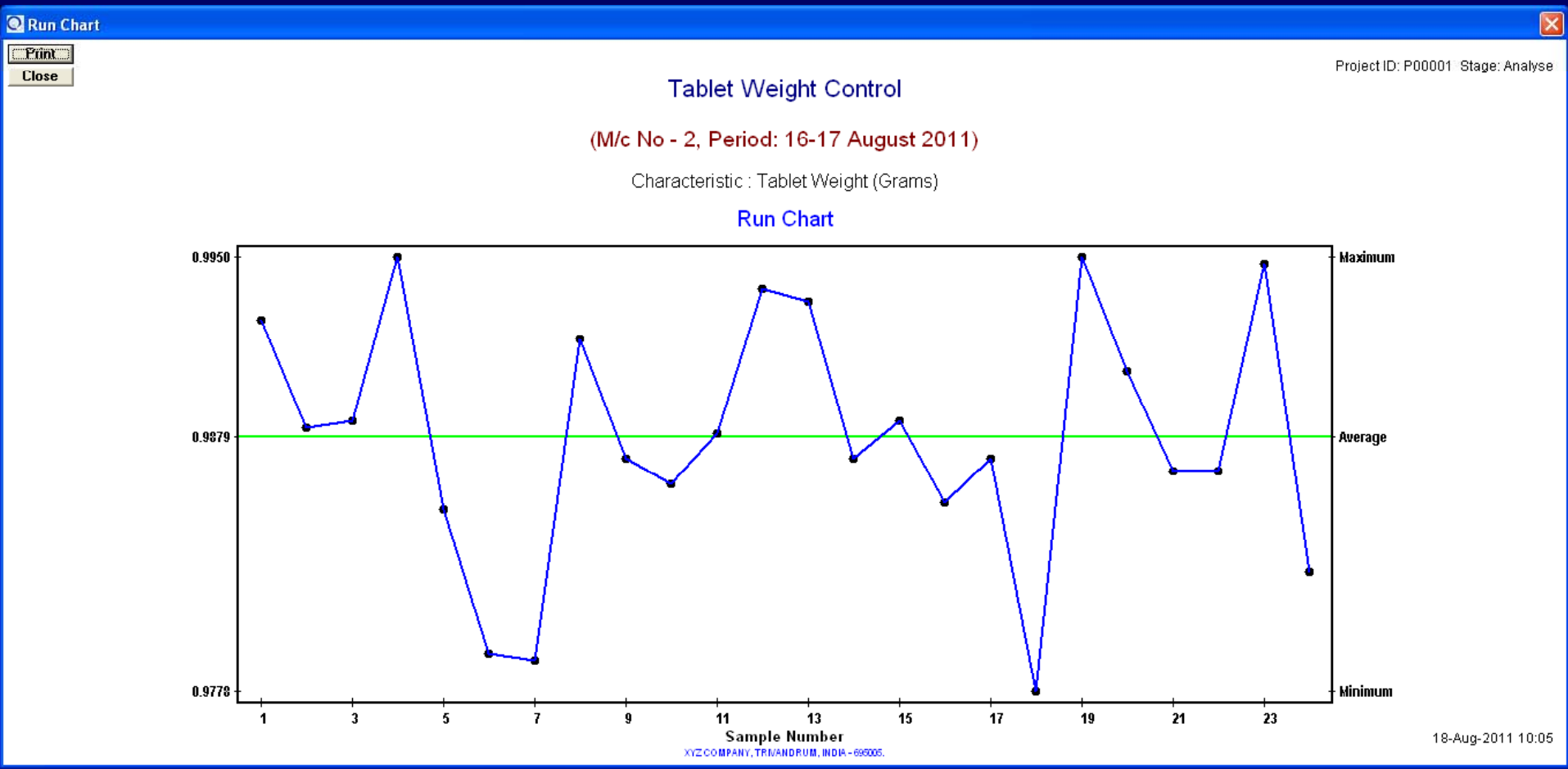
Example Project (Manufacturing Industry)

Frequency Table (optional add-on to Histogram), showing data distribution in tabular form.



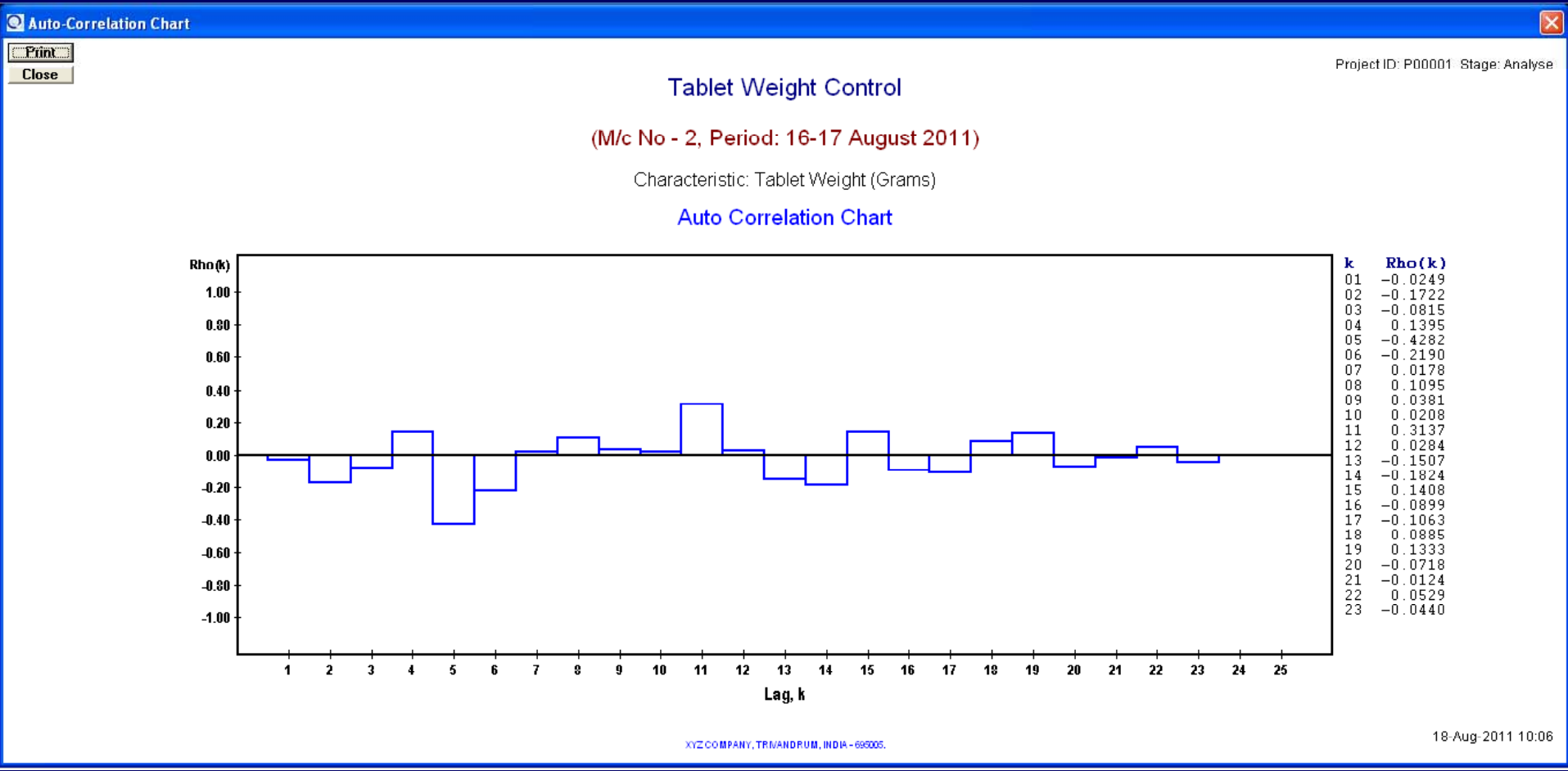
Example Project (Manufacturing Industry)

Normal Probability Plot (NPP) is a very important visual aid for checking the normality of data (i.e., to examine whether the data comes from a population with Normal Distribution). If the data follows Normal Distribution, the plotted points would form a straight line.



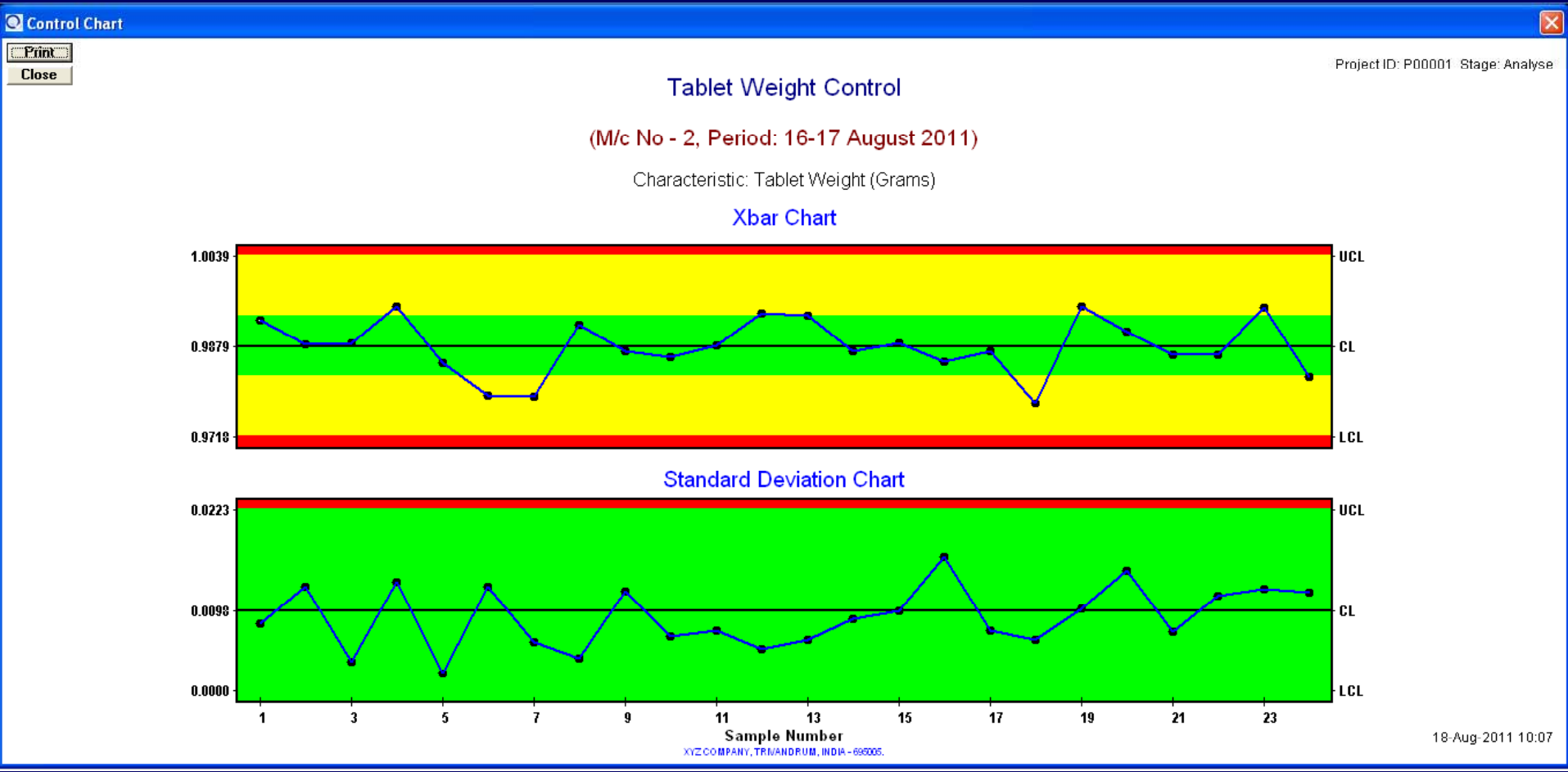
Example Project (Manufacturing Industry)

Run chart is a simple plot of sample averages, which gives a visual understanding of patterns and trends in control chart data.



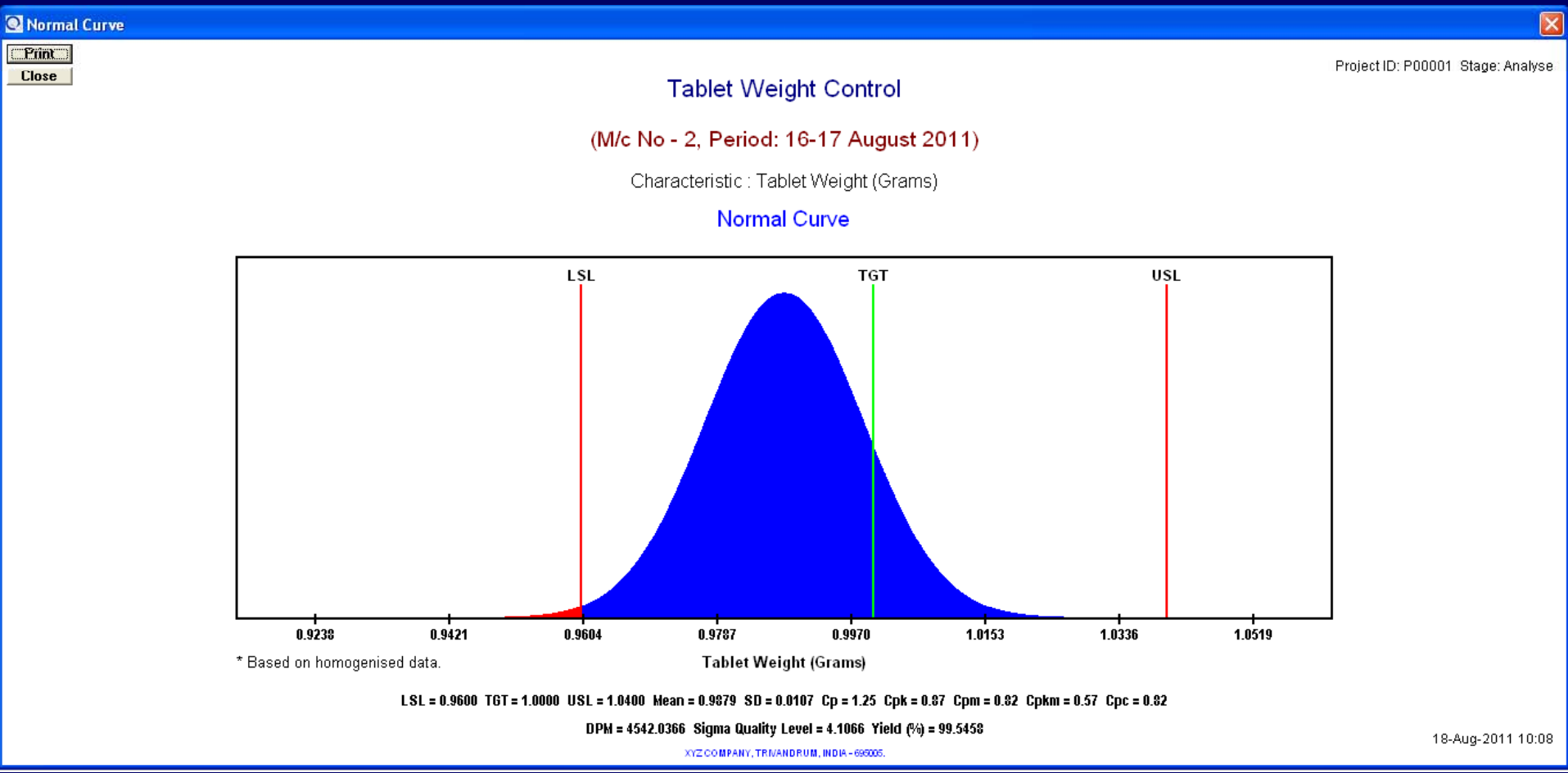
Example Project (Manufacturing Industry)

Traditional SPC charts are not effective when the data is highly auto-correlated (i.e., when consecutive data points are correlated. If the bars on the Auto-Correlation Chart are shorter, it indicates less amount of auto-correlation. In case the data is highly auto-correlated, use Un-weighted Batch Mean (UBM) chart.



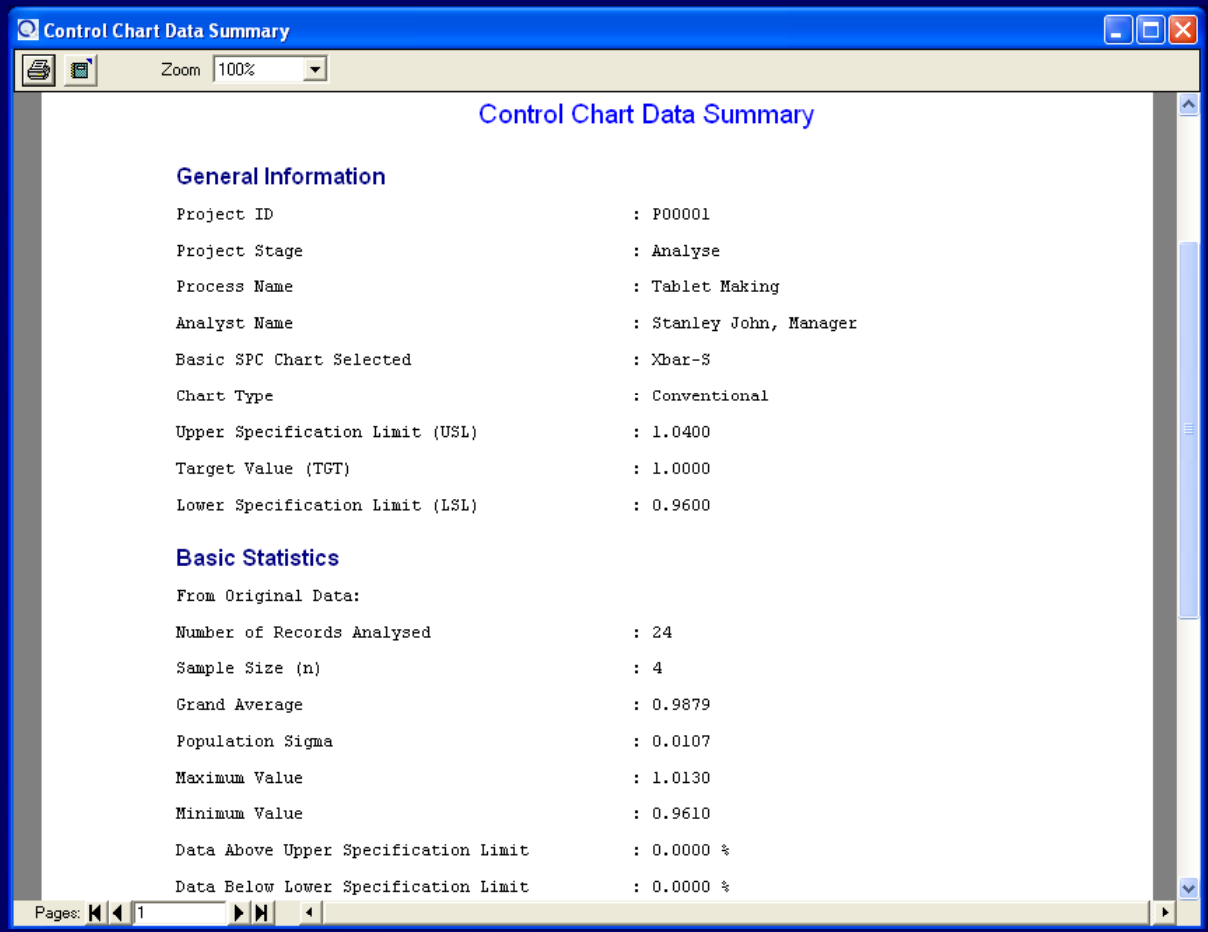
Example Project (Manufacturing Industry)

Control chart shows that the process is under statistical control. That means, there is no sporadic (assignable) cause present. The process is stable.



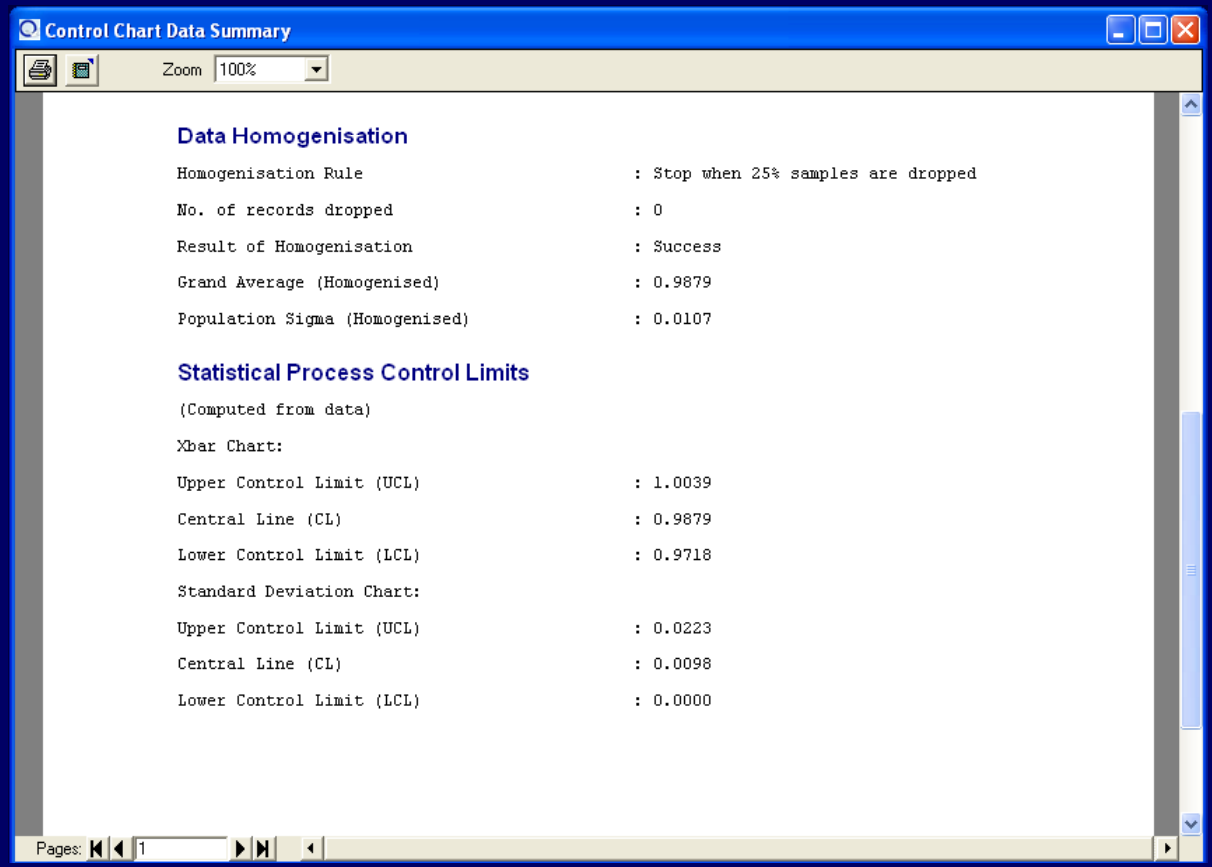
Example Project (Manufacturing Industry)

Six Sigma Metrics & Probability Distribution (Normal) gives an idea about expected rejections. Though none of the data analysed were beyond specifications, the small red zone below the lower specification limit (LSL) indicates possibility of manufacturing out-of-spec products.
Also, the process is barely capable (Cp < 1.33) and not centered (Cpk < 1).



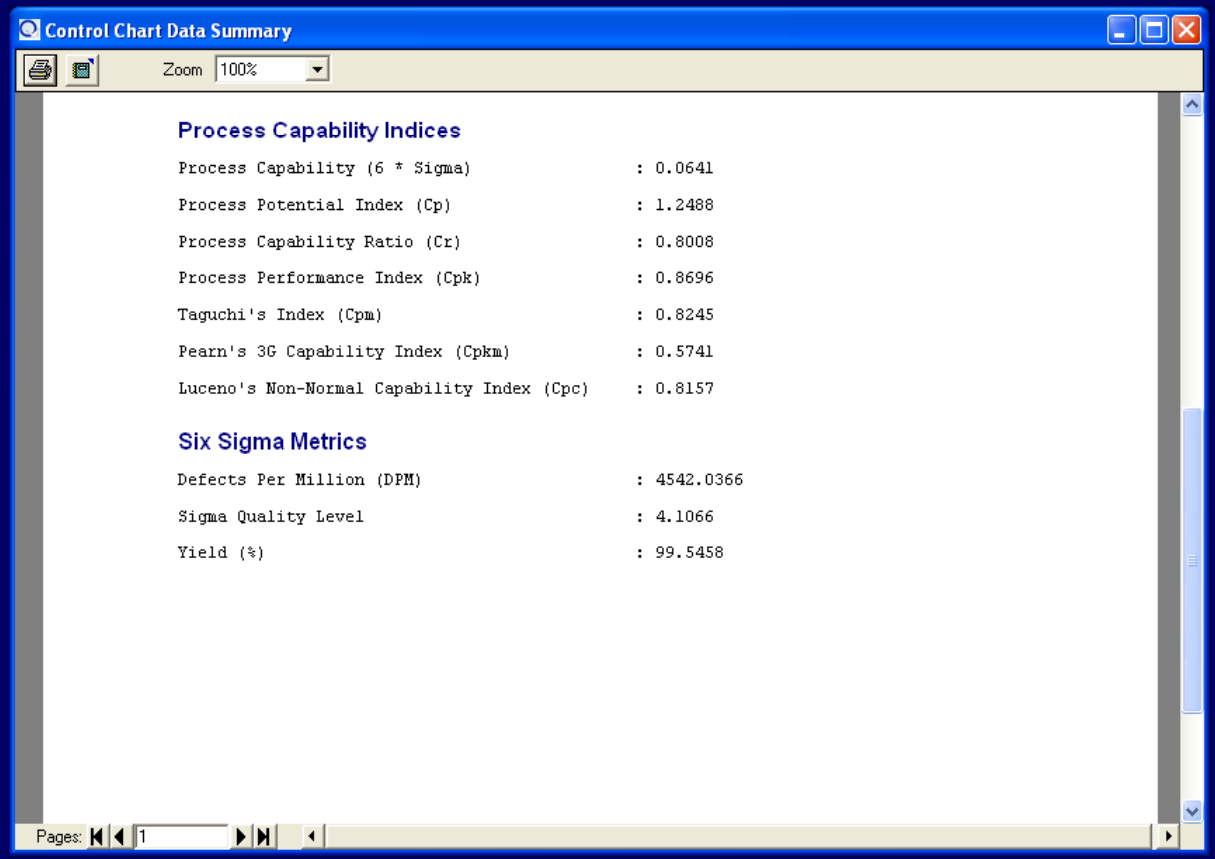
Example Project (Manufacturing Industry)

Now, the reports were looked at. First, the data summary.



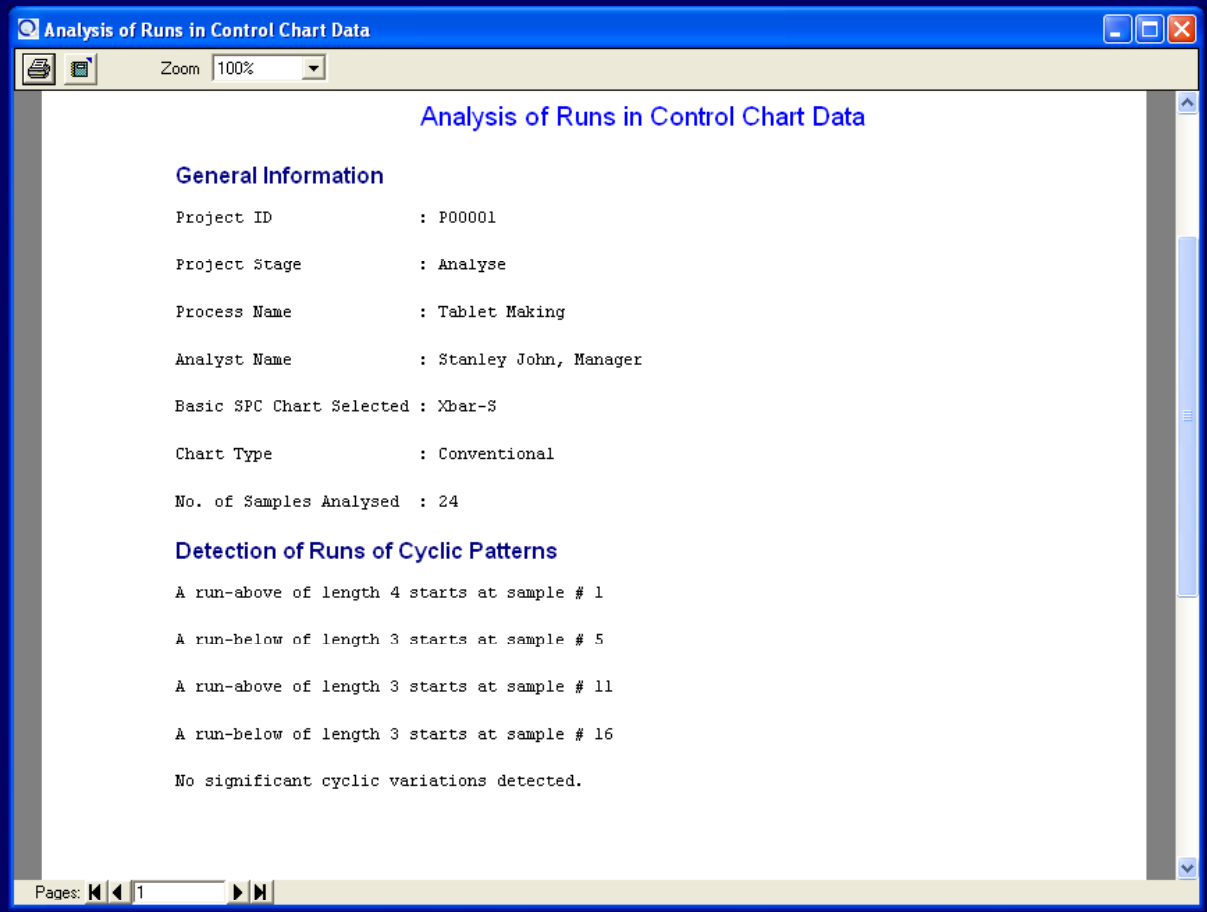
Example Project (Manufacturing Industry)

Data summary, continues.



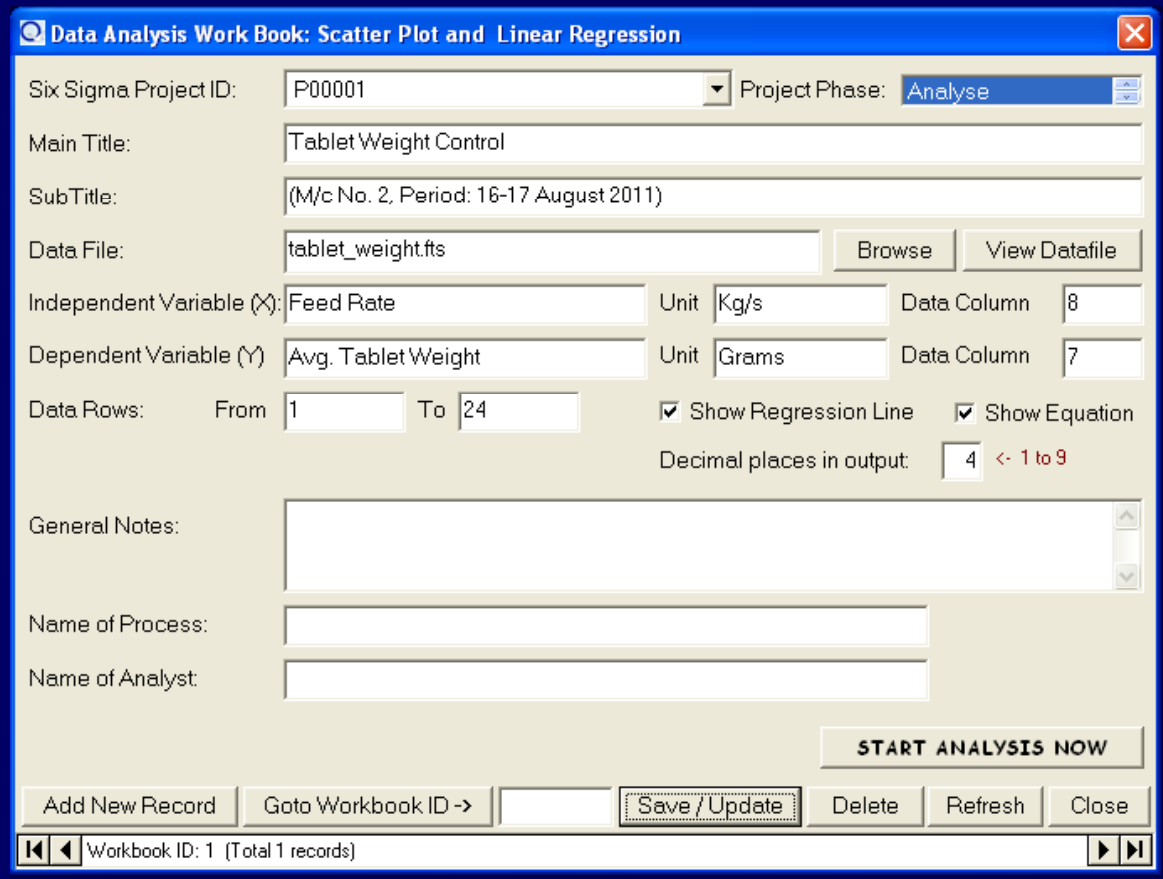
Example Project (Manufacturing Industry)

Data summary, report ends.



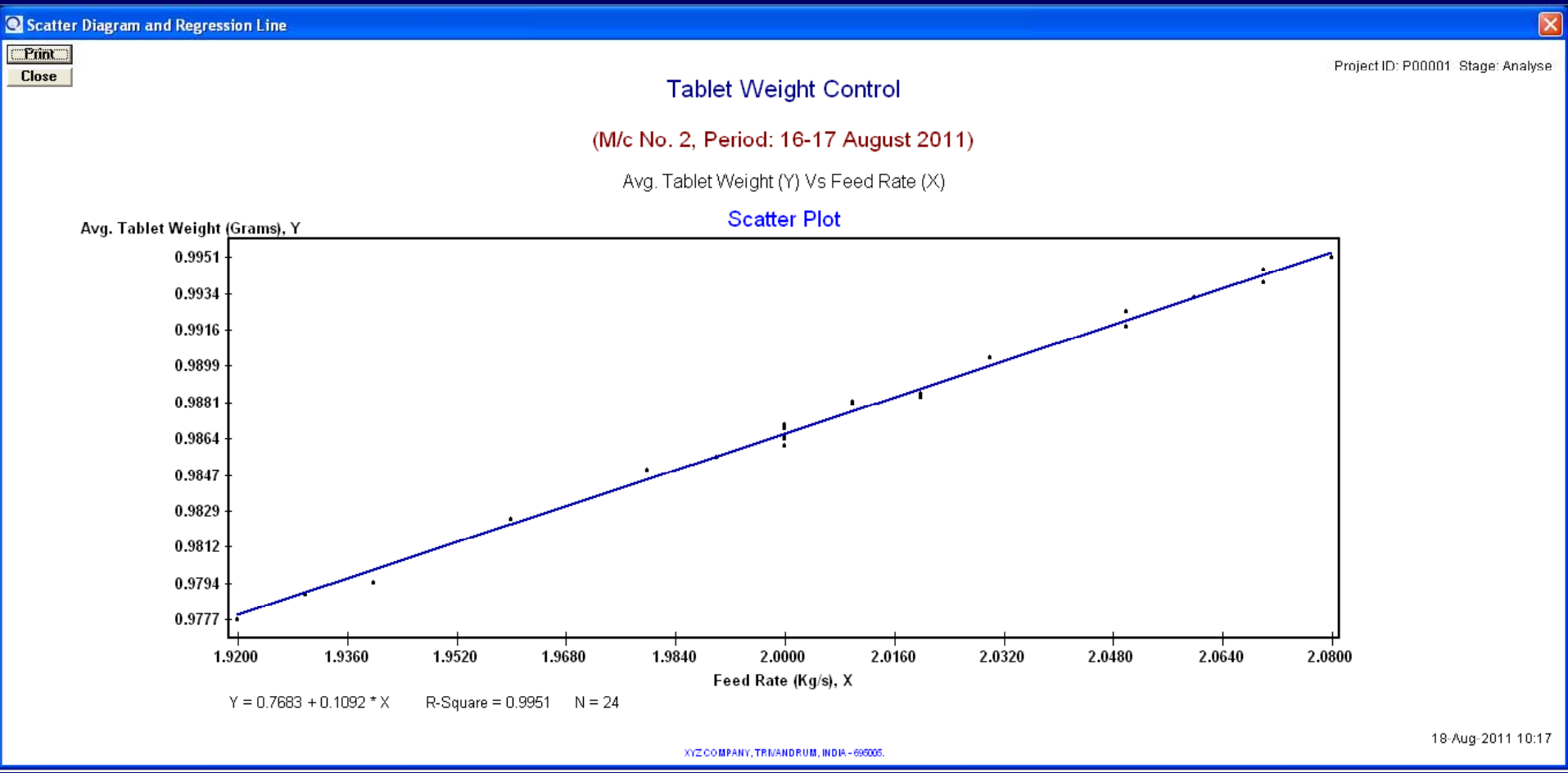
Example Project (Manufacturing Industry)

Then he looked at the Control Chart Run Analysis, but couldn't see any significant cyclic variations. Mr. John has concluded that the real problem is in process setting. From his technical knowledge, he knows that Tablet Weight can be adjusted by controlling the Feed Rate (input variable). But, he needed to establish the relation, i.e., Average Weight of Tablet (Y) Vs Feed Rate (X). For this, he decided to use scatter plot & linear regression.



Example Project (Manufacturing Industry)

Then he created a Scatter Plot workbook.



Example Project (Manufacturing Industry)

By clicking on the 'START ANALYSIS NOW' button, he could se the scatter plot & regression line. As a rule of thumb, R-square value must be at least 0.70 for the regression line to be considered as meaningful. Mr. John looked at the R-square value. It was 0.9951 (very close to the perfect value). So, he decided to use the equation.

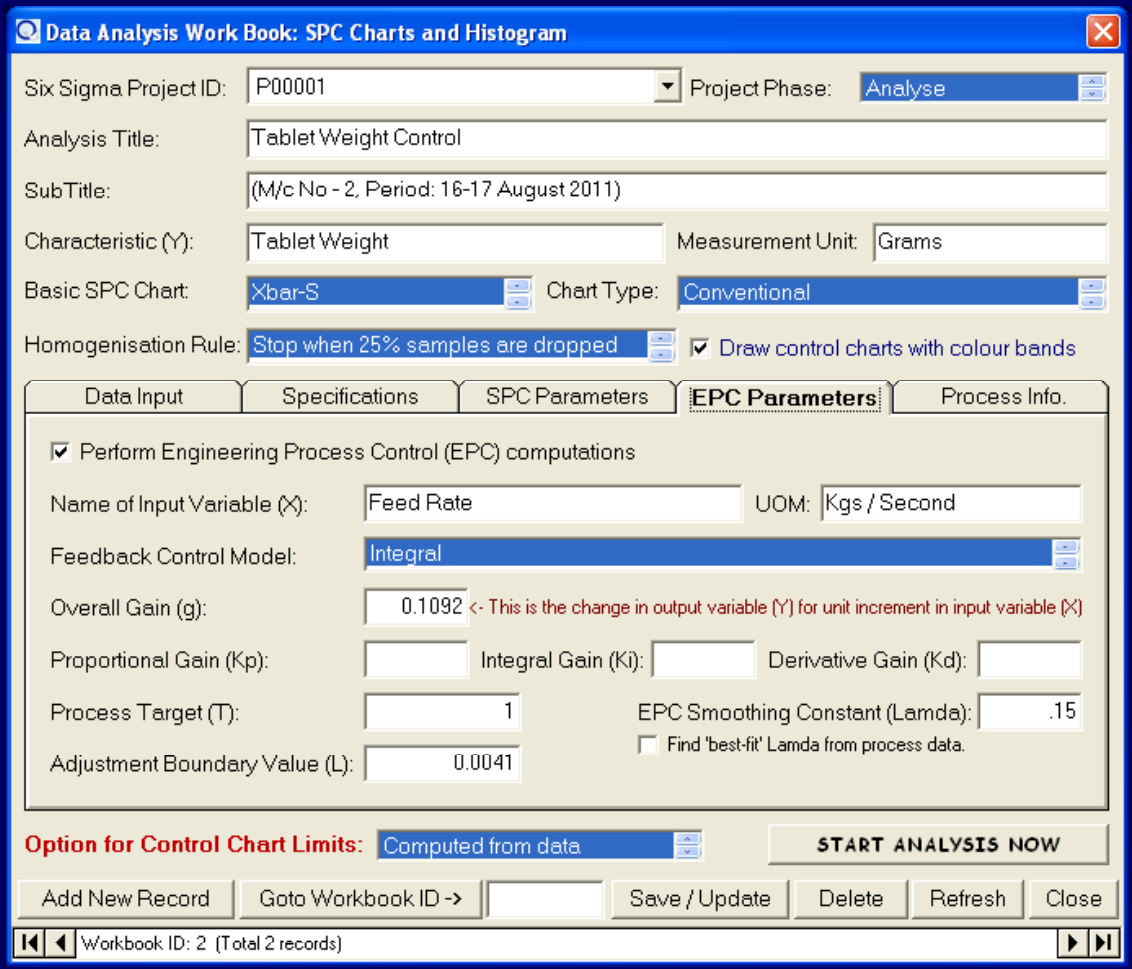
Example Project (Manufacturing Industry)

Setting up an Engineering Process Control (EPC) chart for the Tablet making process:

It involved the following steps (and cues from the User Manual accompanying the SPC software):

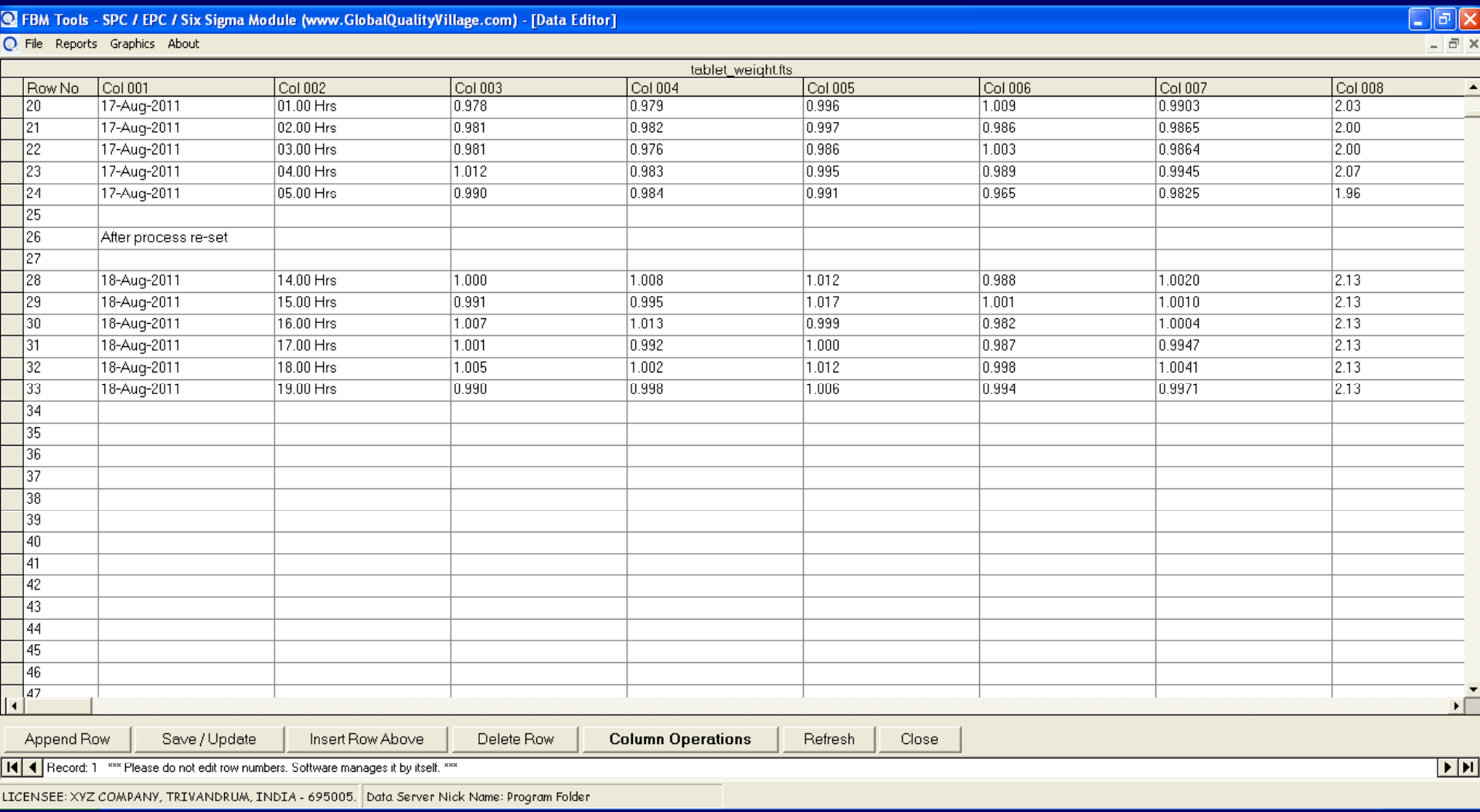
1. Selection of feedback control model: Selected **Integral** model, for simplicity.
2. Setting the parameter (g) for the selected model: Overall Process Gain, **g = 0.1092**
3. Setting the Smoothing Constant (λ) for EWMA predictor: λ **= 0.15** ('best fit' from recent data)
4. Setting the Adjustment Boundary Value (L) for EWMA predictor: **L = 0.0041**
5. Re-setting the process average at the Target value (1.00 gram): Done by engineering means.
6. Installing an EPC chart and monitoring (and adjusting) the process: For this, he went back to the SPC software.

Let's see what he did there.



Example Project (Manufacturing Industry)

Mr. John has edited the original control chart workbook (EPC Parameters tab), as above.



Row No	Col 001	Col 002	Col 003	Col 004	Col 005	Col 006	Col 007	Col 008
20	17-Aug-2011	01.00 Hrs	0.978	0.979	0.996	1.009	0.9903	2.03
21	17-Aug-2011	02.00 Hrs	0.981	0.982	0.997	0.986	0.9865	2.00
22	17-Aug-2011	03.00 Hrs	0.981	0.976	0.986	1.003	0.9864	2.00
23	17-Aug-2011	04.00 Hrs	1.012	0.983	0.995	0.989	0.9945	2.07
24	17-Aug-2011	05.00 Hrs	0.990	0.984	0.991	0.965	0.9825	1.96
25								
26	After process re-set							
27								
28	18-Aug-2011	14.00 Hrs	1.000	1.008	1.012	0.988	1.0020	2.13
29	18-Aug-2011	15.00 Hrs	0.991	0.995	1.017	1.001	1.0010	2.13
30	18-Aug-2011	16.00 Hrs	1.007	1.013	0.999	0.982	1.0004	2.13
31	18-Aug-2011	17.00 Hrs	1.001	0.992	1.000	0.987	0.9947	2.13
32	18-Aug-2011	18.00 Hrs	1.005	1.002	1.012	0.998	1.0041	2.13
33	18-Aug-2011	19.00 Hrs	0.990	0.998	1.006	0.994	0.9971	2.13
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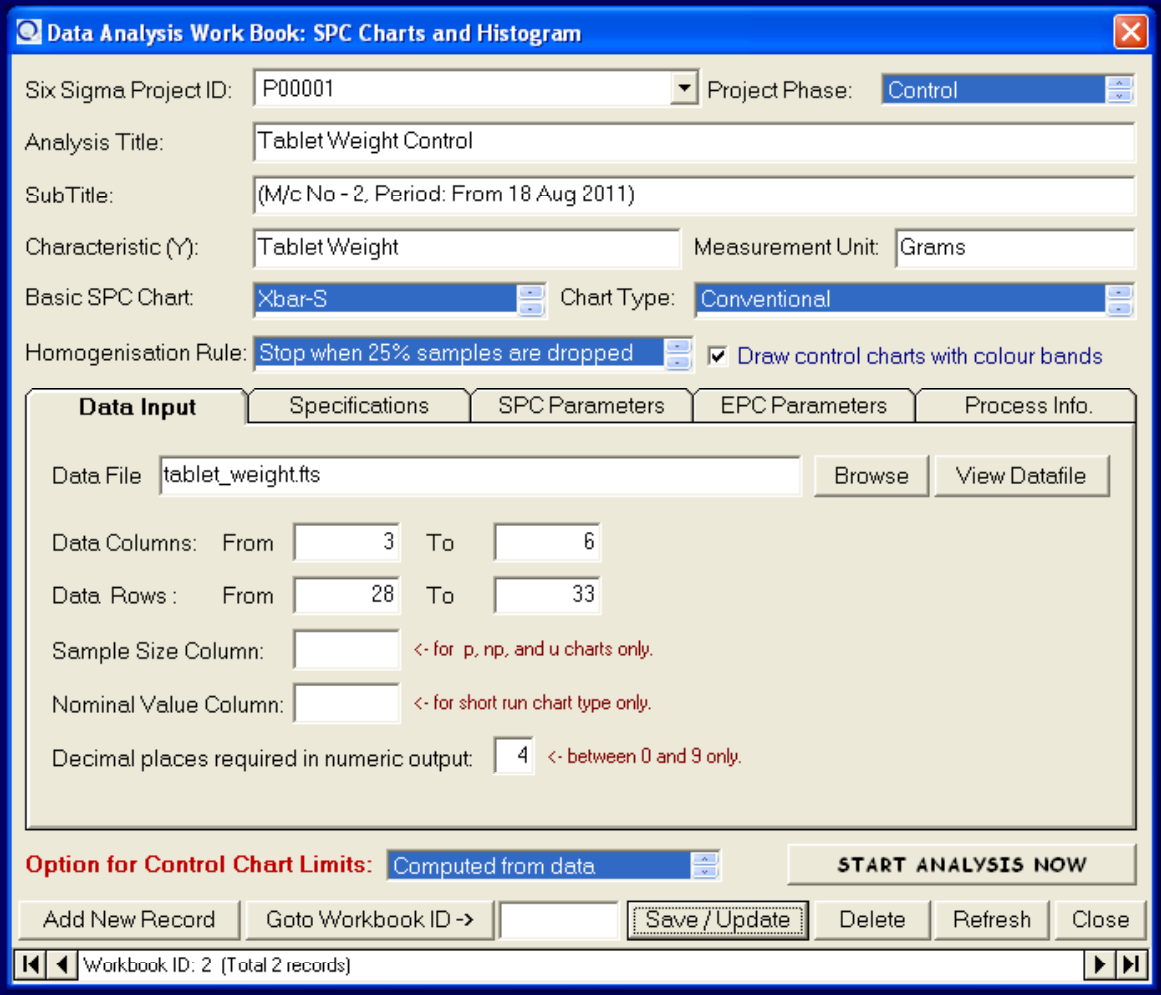
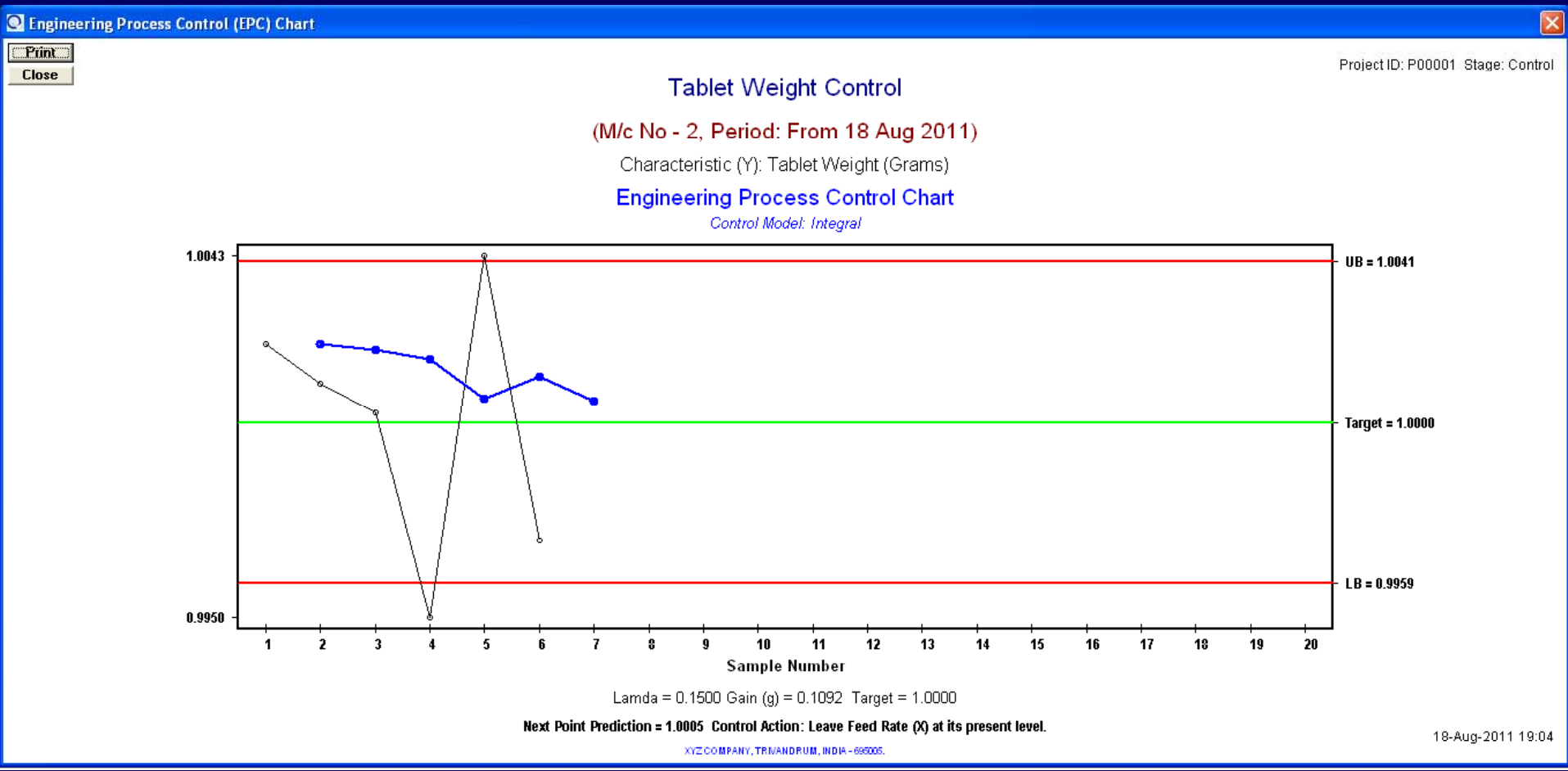
Example Project (Manufacturing Industry)

After process re-set, fresh data were taken from 2.00 PM onwards and entered in the same data file as above.



Example Project (Manufacturing Industry)

Then, the work book entries were modified (such as project phase changed to ‘Control’, etc) as above.



Example Project (Manufacturing Industry)

Then hit the 'START ANALYSIS NOW' button, and checked the EPC chart ('Graphics' menu).

The thin graph in black colour is the sample mean. The thick graph in blue colour is the EWMA predictor for process average. The next point prediction (predicted value for process average at 8.00 PM) was 1.0005 and the advice was to leave the Feed Rate (X) at its present level (i.e., 2.13).

We have discussed two practical projects so far.

What are you thinking now ?

Never thought that such things could be done in your organisation also !

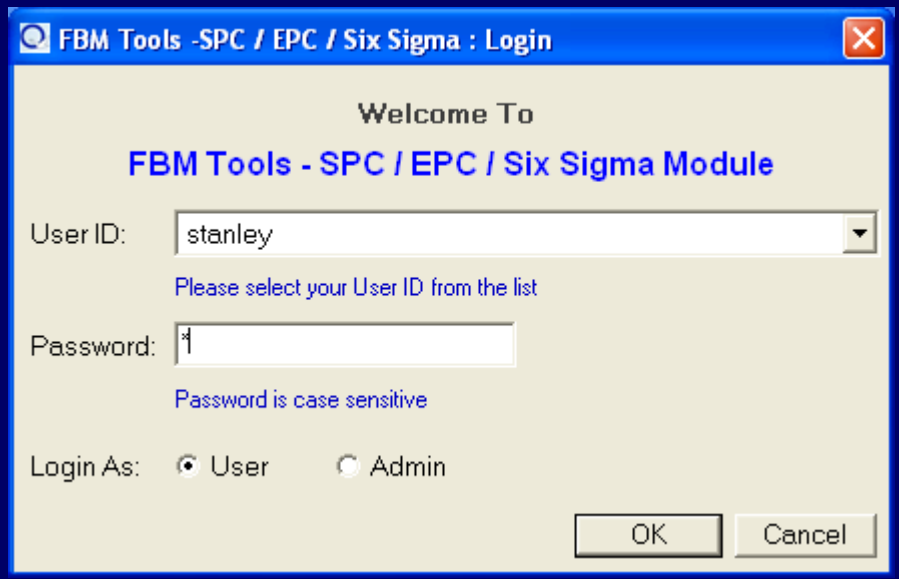
As they say, it is better late than never.

Our software could be a helpful companion in your improvement initiatives.

This product is available in three editions (Academic / Lite / Standard).

Each edition is designed to serve a particular user category.

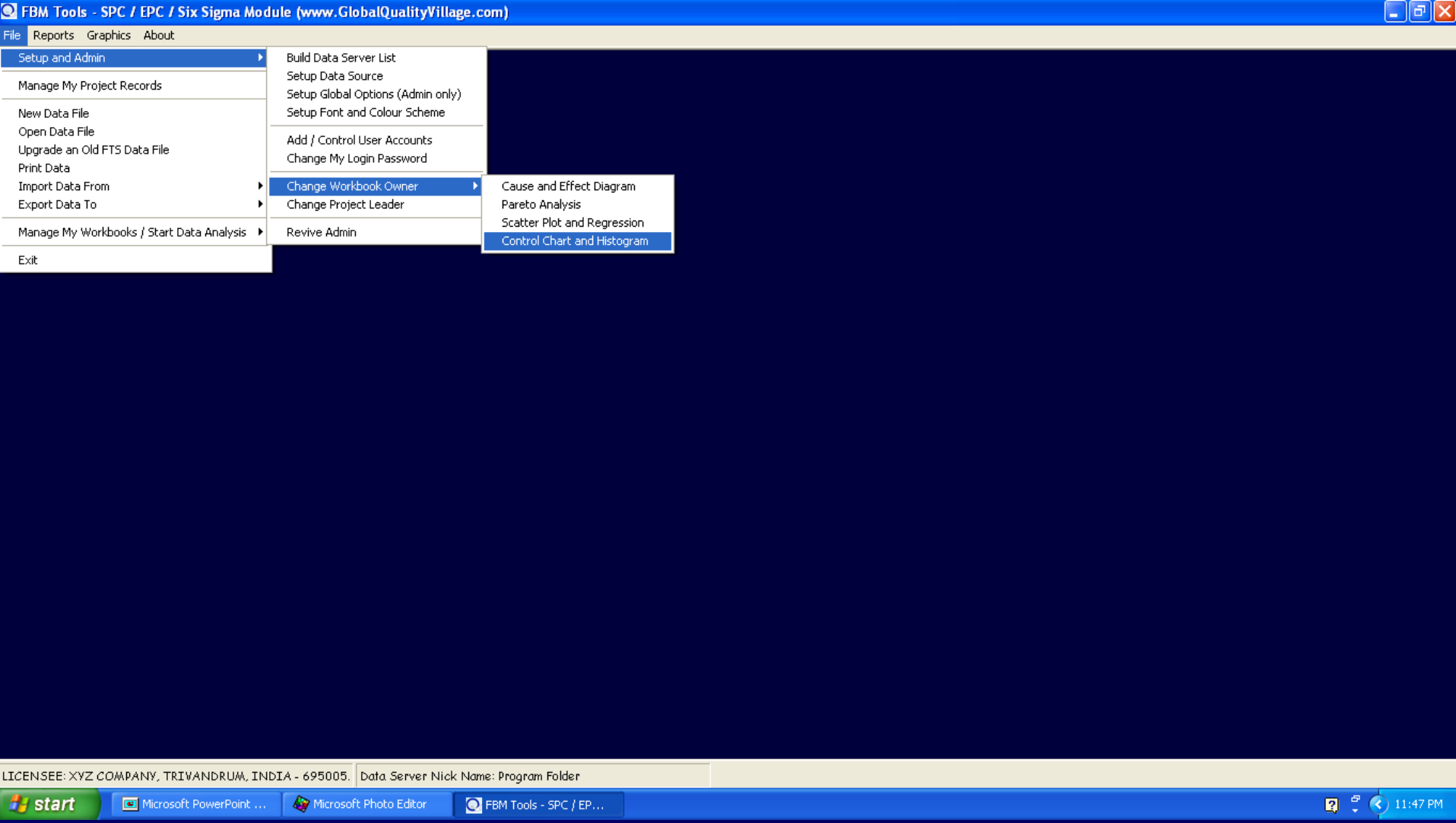
Let us now talk about the software features in detail.



This is the login screen.

Select your User ID from the list, enter the password, and select a login option (User / Admin).

Then press ‘OK’ to enter the software.



The major menu items are: File, Reports, Graphics, and, About.

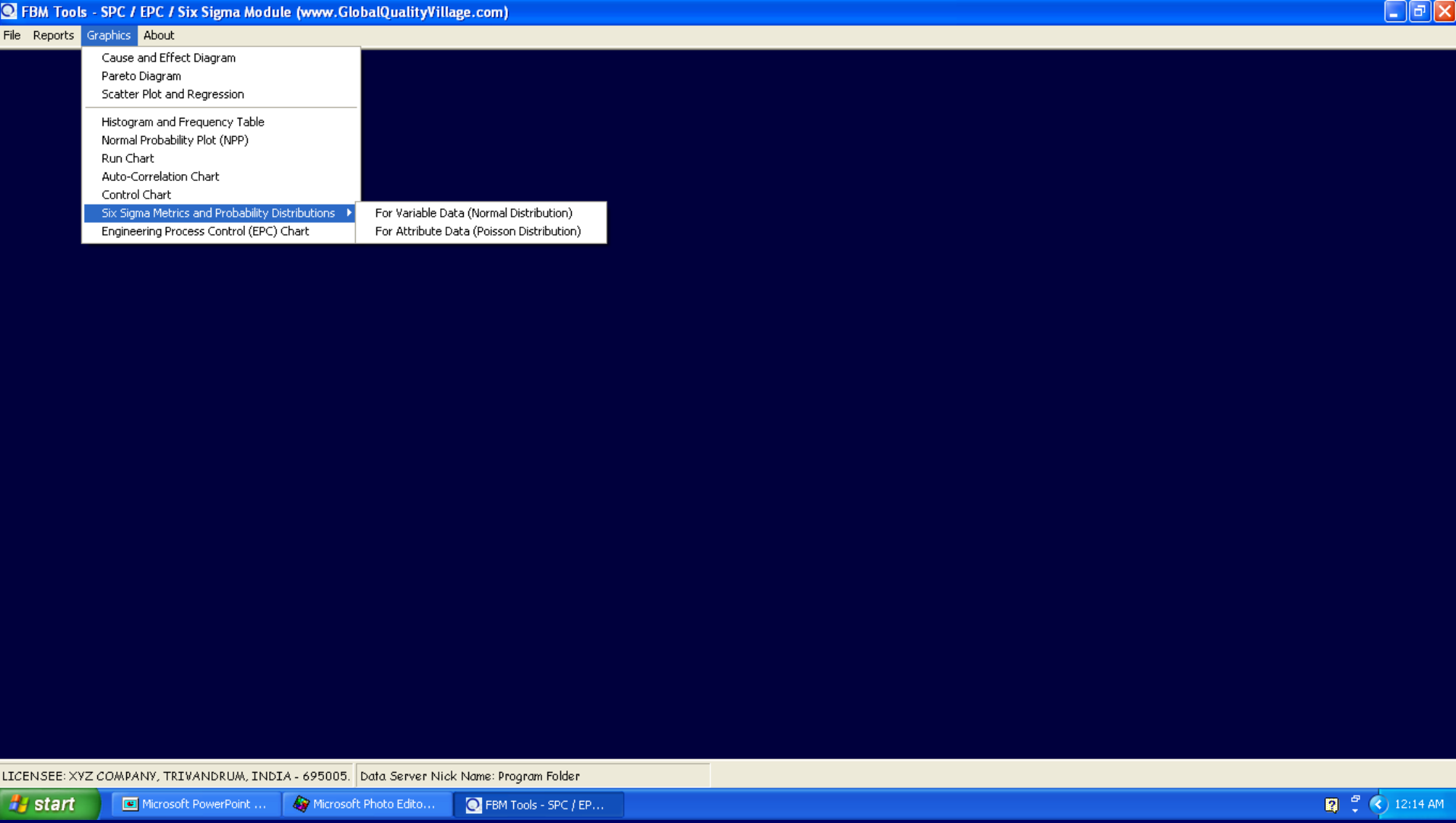
Under the **File** menu, users can create six sigma project records, create / edit data files in this software's own format, import data from MS-Access / Excel / Text files (also export data to these file formats), create workbook records, and, analyse data through these menu items.

System Administrator can access various admin and set-up menu items.

Reports menu generates reports in text form, which can be printed or saved as PDF files.

Project and workbook related queries can be made here. There are many data filters which helps in segregating only those records (related to projects you are involved in and workbook records created by you) that you wish to view during your Six Sigma projects.

Control chart data summary and run analysis reports can also be generated through this menu.



Graphics menu is the heart of this software. You can view/print graphs, or save them as PDF files.

Cause & Effect Diagram, Pareto Diagram, and, Scatter Plot are very important tools required for most of the Six Sigma projects.

The rest of the graphical output relates to SPC control charts. Advanced users can generate EPC prediction chart also.

About menu tells about the software edition, product tracking number, contact address for technical support, etc.

Let us now look at more details of this software.

Basic SPC Charts Supported:

Name of chart	Data	Typical areas of application
X - Moving Range	1 data / sample	Chemical processes
Xbar - Range	2 - 5 data / sample	Turning operation
Xbar - SD	2 - 200 data / sample	Blanking process
Fraction Defective (p)	sample size >= 1	Visual inspection (good/bad) of lot items
Nos. Defective (np)	sample size >= 1	Visual inspection (good/bad) of lot items
Defects / Item (c)	sample size = 1	Visual defects (count) of castings
Defects / Unit (u)	sample size > 0	Clerical mistakes (count) in data entry

Advanced SPC Charts Supported:

Name of chart	Data	Typical areas of application
Short run / Standardized	Same as basic charts	For job-shop (small lot production)
Slopping / Tool wear	2 - 200 data / sample	Where gradual process shift is inherent
Six Sigma Process	2 - 200 data / sample	For monitoring Six Sigma processes
Coefficient of variation (CV)%	2 - 200 data / sample	Normally, in textile and jute processing
Moving Avg. - Moving Range	1 data / sample	When data is slightly auto-correlated
Moving Avg. - Moving SD	1 data / sample	When data is slightly auto-correlated
CuSum	1 - 200 data / sample	To detect small shifts in process mean
EWMA	1 - 200 data / sample	To detect small shifts in process mean
UBM	1 data / sample	When data is highly auto-correlated

Other Tools Supported:

Name of Tool	Typical use
Cause and Effect Diagram	Brainstorming (cause-effect mapping)
Pareto Diagram	Finding the vital few defects / problems
Scatter Plot and Linear Regression	To study x-y relation between variables
Histogram and Frequency Table	To visualize spread (variability) in data
Normal Probability Plot (NPP)	To check normality of data
Auto-Correlation Chart	To check auto-correlation in data
Run Chart	To visualize trends in process mean
Normal Curve	To visualize variability Vs specifications
Poisson Distribution	To visualize defect data distribution

Statistical Analysis and Computations:

- Summary statistics
- Run analysis (detection of cyclic variations)
- Process capability indices - Cp, Cpk, Cpm, Cpkm, Cpc (for non-normal data)
- Six Sigma metrics - Defects Per Million, Sigma Quality Level, Yield %

Engineering Process Control (EPC):

- Supports Integral, Proportional-Integral, and, Proportional-Integral-Derivative (PID) control models
- Draws EPC prediction chart
- Performs process adjustment calculations

Optional Control Chart Features:

- Can draw control charts with lines or colour zones
- Can also draw charts with user-defined limits (process monitoring mode)
- Homogenizes data with user-selected cut-off %

General Features:

- Can import data from Access / Excel / Text files
- Can export data to Access / Excel / Text files
- Supports workgroups & project management
- Includes a detailed user manual (in pdf)
- Includes sample data files for every tool
- Provision for FREE / paid user training on software operations (at our training facility in Kerala)
- Provision for SPC / EPC / Six Sigma training (in Kerala) & e-Consultancy at extra cost.

OS & Recommended Minimum Hardware:

- Operating System : Windows XP or later editions
- Computer : PC / Laptop
- CPU speed : 1 GHz
- RAM : 1 GB
- Hard Disk : 2 GB free disk space
- Screen : Color monitor with 1024 x 768 resolution or higher
- Printer : Color Inkjet / Laser printer

Edition-wise Comparison:

This software comes in two forms, namely, **LITE** Edition (multi-user) and **STANDARD** Edition (multi-user) to suit the varying requirements of prospective buyers.

We highly recommend STANDARD edition for corporate users, and, LITE edition for small businesses and academic users (professors teaching SPC / Six Sigma, executives preparing for Six Sigma Green Belt / Black belt examination, etc.).

Both editions are economically priced, making them very affordable to corporate bodies as well as individuals.

Particulars	Lite Edition	Standard Edition
Target user segment	SMEs, Teachers, Students	Large Companies
Max. records (rows) / analysis	100	10000
Max. No. of data columns	50	200
Max. No. of Users / Site License	5	Unlimited
Product warranty & support	3 months	6 months
User training in Kerala (India)	For nominal fee	FREE for 1 person
No. of FREE upgrades	2	3
Migration to Standard Edition	Allowed	Not required

Thank you for the patience. Please see the CD pricing.

Best Value for Money

STANDARD Edition (Product code: S0003B) of this software is priced **US$ 199** (Indian Rupees 11400) only per site license.

Note: One **site license** of **Standard** edition allows unlimited number of users at buyer's one site (premises). This offer includes product support for six (6) months, 8-hours of hands-on training for one user at our training facility in Kerala (India), and THREE major upgrades (i.e., version 7.xx to version 10.xx).

LITE Edition (Product Code: S0002B) of this software costs **US$ 130** (Indian Rupees 7400) only per site license.

Note: One **site license** of **Lite** edition allows a maximum of five (5) users at buyer's one site (premises). This offer includes product support for three (3) months and TWO major upgrades (i.e., version 7.xx to version 9.xx). Lite edition is generally suitable for academic purposes and/or small organizations.

You can migrate to Standard edition by paying the price difference within 3 months of purchasing the Lite edition.

To purchase this software just now, please visit the secure **eShop** on our website or contact us at this address:

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