

## Automated Scheduling Tracking and Reporting Of Audits

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### ABSTRACT:

ASTRA (Automated Scheduling Tracking and Reporting of Audits) is an Internal PCI (Process Compliance Index) Audit tool which will be used in certain pockets of Software Company to Schedule and track the Quality Audits. ASTRA is a web based application and provides a collaborative platform to manage Audits effectively for project quality standards i.e. ISO 9001: 2008 and TL90K (Telecom Standard). It is a centralized database for all Audit related information and supports the Audits throughout its Audit Cycle. This website is role based and provides the stake holders their own role based portal view. In PCI Audits the ongoing projects in software Company are audited by Quality team (Auditor) either quarterly or of half yearly, to ensure that the project team during development and maintenance adheres to the guidelines or the process that define in the OMS (Organizational Management Structure). The Audit process helps the organization in achieving CMMi Level 5 certification from some trusted Audit firms like KPMG.

**KEYWORDS:** ASTRA: Automated Scheduling Tracking and Reporting of Audits, PCI, and OMS.

### INTRODUCTION:

ASTRA (Automated Scheduling Tracking and Reporting of Audits) is an Internal PCI (Process Compliance Index) Audit tool which will be used in certain pockets of Software Company to Schedule and track the Quality Audits. ASTRA is a web based application built on .Net platform and using client server technology that is ASP.Net. The proposed project has C # .NET as a front end and SQL Server as a back end. ASTRA is a web based application and provides a collaborative platform to manage Audits effectively for project quality standards i.e. ISO 9001: 2008 and TL90K (Telecom Standard). It is a centralized database for all Audit related information and supports the Audits throughout its Audit Cycle. This website is role based and provides the stake holders their own role based portal view.

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In ASTRA there are mainly five roles:

MR ( Management Representative ) : Someone from Quality Business Unit Head

LA (Lead Auditor) : Quality Manager

Auditor: Quality Team Members

Auditee: Project Managers or Project Lead

ASTRA Admin: Someone having in-out knowledge of the Tool

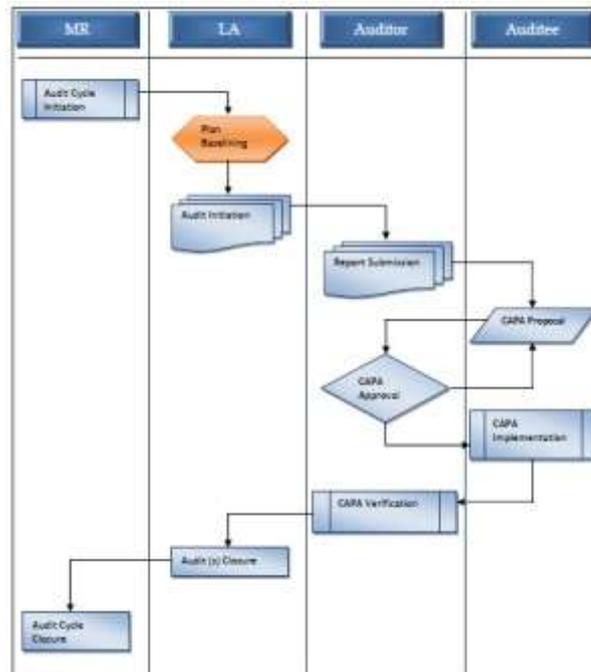
The MR initiates the Audit cycle that may be in a quarterly basis or half yearly. The LA does Project base lining i.e. filters the project that will be audited in the audit cycle. The Audit date is finalized as per the Auditee (Project Team) availability and the Auditor does the Audit of the Project based on the guidelines that the company has defined in OMS. The Project Team explains how they are tracking their project activities like Defect Tracking, Issue Tracking and based on it the Auditor takes a note of the Positive Findings, Observation and if there is some deviation from the guidelines they give NC (Non Conformance) to the project team.

The Project team has to come up with a CAPA (Casual Analysis and Preventive Action) Proposal stating how they are going to work to fix the NC. The Auditor approves the CAPA proposal and the

Project Team implements the NC. If everything seems to be working fine then the NC is closed and similarly the Audit of the Project is closed and thereby Audit Cycle also gets closed.

ASTRA Admin manages the complete ASTRA application. All the details of the employee is being entered by the ASTRA Admin. ASTRA Admin will update the employee role that will be effective during registration for Auditors and Auditee. The application is built in such a way that no one else other than Admin can delete any findings of the Audit since the data is very confidential and is taken as a source during external audits. ASTRA Admin generates reports like Audit Cycle History Report, Non-Conformance Reports etc to show it to the senior management.

### Flow- chart Diagram & E-R Diagram



**Fig . 1**

### SYSTEM INTERFACE:

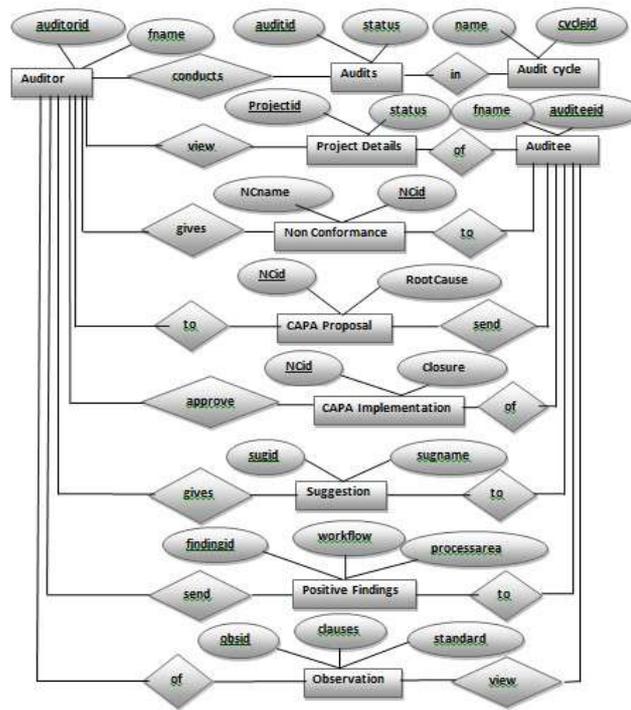
1. System will interact with database without worrying whether the client has SQL Server or Oracle as a Backend database.
2. The WebPages will be displayed in the web browser.
3. browser.

### USER INTERFACE:

The user interfaces in this project has been configured as per the roles (LA, MR, Auditor, Auditee and ASTRA Admin).

For MR below screens are made available in the application

1. Login Screen in the first screen to access
2. the ASTRA application
3. Access to Audit Cycle Menu to Add an
4. Audit Cycle
5. Access to Route Button to move the details to LA for project base lining
6. Closing the Audit Cycle
7. View the list of Open/Close Audits and Findings



**Fig.2**

For LA below screens are made available in the application

1. Login Screen in the first screen to access
2. the ASTRA application
3. Access to Audit Cycle Menu to view the
4. Audit Cycle details
5. Access to create the project details in the application which is also called as project base lining
6. Creating the list of Audits and route it to
7. Auditors
8. View the list of Open/Close Audits and Findings

For Auditor below screens are made available in the application

1. Login Screen in the first screen to access the ASTRA application
2. The Auditor will audit the project and
3. report any Positive Finding, Observation or
4. NC to Auditee
5. The Auditor will close the Audit

For Auditee below screens are made available in the application

1. Login Screen in the first screen to access the ASTRA application
2. The Auditee will make a list of the Project activities/documents pertaining to their projects like Defect Management, Issue Management etc.
3. The Auditee will close the entire NC reported by the Auditor
4. The Auditee will make CAPA Proposal based on the NC
5. The Auditee will do the Implementation of the CAPA Proposal

For ASTRA Admin below screens are made available in the application

1. Employee master page to capture the details of all the employee
2. ASTRA admin set roles ( MR/LA/Auditor/Auditee ) of an employee
3. Delete NC/Audits etc created accidentally after approval
4. Generates reports as per the requirement of the senior management

## OBJECTIVE OF THE PROJECT:

Some of the major objectives of having ASTRA Application in place are as follows:

- 1.ASTRA is a web based application and will replace Excel sheet that is used for tracking PCI audits in Software Companies
- 2.ASTRA tool can be used for auditing
- 3.projects having different quality standards like ISO 9001:2008 and TL90K(Telecom Standard)
- 4.- ASTRA is a role based application and the users will be able to access the forms/pages as per the configuration done by the ASTRA Admin.
- 5.ASTRA is designed in such a way that the
- 6.security remains intact and no confidential data can be deleted by anyone else other than ASTRA Admin.
- 7.ASTRA data having all the findings of the Audits will be taken as a source when going for external audits to produce data.
- 8.Audit findings like NC ( Non Conformance
- 9.), Positive findings, Suggestion and Observations can be very well tracked in the tool and brought to closure
10. ASTRA Admin can generate reports like Audit Cycle History Report, Non-Conformance Reports etc to show it to the senior management post Audit Cycle closure.
11. ASTRA Admin manages the Employee
12. Master database in which all the employee information and its role in ASTRA are defined.

## ADMIN SERVICE:

ASTRA Admin will update, delete the audits and findings created accidentally and generate reports based on information required by senior management.

## CONCLUSION AND FUTURE ASPECTS:

The future scope and enhancement of the application

is a continuous process. The application is designed in such a way so that it can be updated to higher version. I would like to see the following further enhancement in the ASTRA Application: -

1. Streamline the application as per OMS, ISO 9001:2008 and TL90K standard
2. Use CSS, Java Script and JQuery to enhance the ASTRA application GUI.
3. ASTRA application can be made available on Mobile (Android/Windows platform)
4. Have a shadow(backup) table of all the existing table
5. Revamp this application using Stored Procedure everywhere to enhance the application performance.

## REFERENCES:

1. Mathew MacDonald (Latest)-ASP.NET- The Complete Reference.
2. Shibi Panikar, Kumar Snajeew (Second Edition,2010)-Magic of ASP.NET with c#.
3. Thiru Thnangarathnam (Latest)-Professional ASP.NET 2.0 Database.
4. Annee Bohem(2011)-Murach's ASP.NET 4 Web Programmimg with VB 2010.
5. Peter DeBetta-Introducing Microsoft SQL Server 2005 for Developer.
6. Tutorial Points & W3 school.