

Taking Advantages of APDM for Management and Planning Support

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Abstract

After the implementation of the APDM at PETROBRAS, next step was to design solutions to interact with the APDM so as to take the most from this invaluable optimized data model to serve our business requirements.

One solution example that will be presented in this paper is related to the Scenario Builder – an application developed in house that relies on the APDM and makes available thermo-hydraulic transmission gas pipeline simulation analysis to different levels of the company professionals such as technicians, engineers, manager and directors in such a simple way to permit its use even to the ones that are not specialized professionals in this technology.

This paper will present the GIS Solution we have implemented that we named Scenario Builder and that underlines the benefits of adopting an easy-to-use and practical application that makes GIS and APDM even more appealing to non specialized employees.

Introduction

The business environment and competition imposes a strict demand on quick, accurate and reliable information to support management, planning, business and engineering activities. Since GIS, APDM and other specialized tools provides powerful resources in helping coping with the nowadays challenges they become the focus of the attention of many companies worried with improving performance of their business activities.

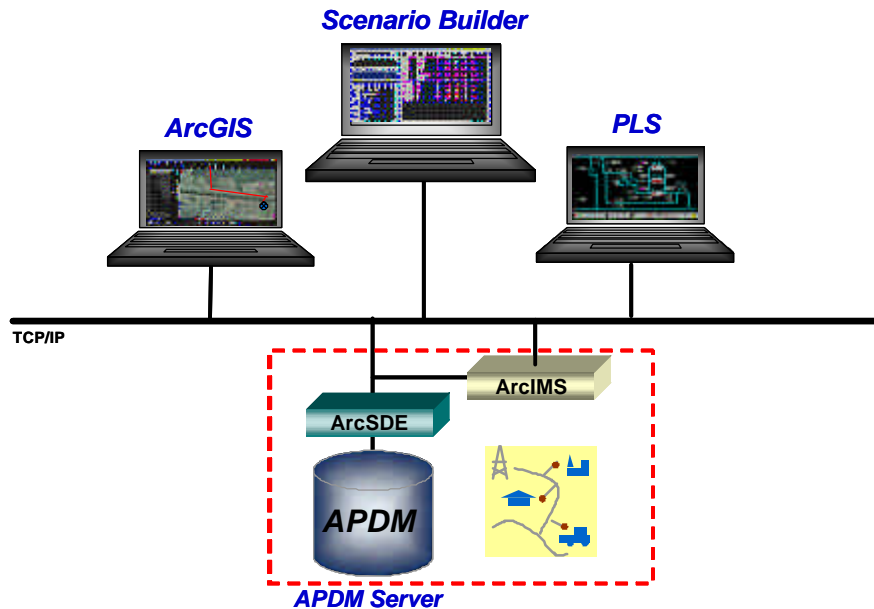
The drawback of these specialized tools is related to the intensive training they require from the users.

This paper address this difficulties and presents a solution called Scenario Builder that overcomes this drawback by designing an easy-to-use interface that operates with a GIS, APDM and a Specialized Thermo-hydraulic Gas Pipeline Simulator – PLS, all in background without requiring the user to be trained on all of these tools.

The Scenario Builder application was developed by the GIS group of PETROBRAS as an internal non-commercial tool taking advantage of the powerful resources of the ArcGIS technology with the sole objective of making GIS available to every non trained and non specialized employee of the company and also optimizing the internal working process related to the Natural Gas Business.

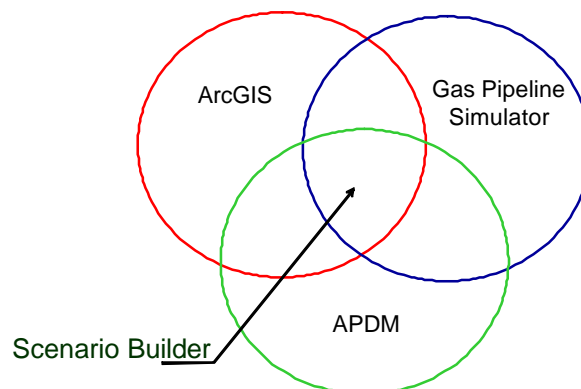
System Architecture

The schematics bellow shows the system architecture highlighting the Scenario Builder solution that acts as a web based user interface that allows the communication between the ArcGIS, APDM and PLS.



Scenario Builder Description

The concept behind the Scenario Builder relies on an interface design the makes use of different applications transparent to the user and not requiring any specializes training. Many departments from a gas pipeline company are involved in its business workflow in different levels and intensity but most if not all of them depend upon a GIS solution with a Pipeline Data Model. The figures bellow represents the interaction between the applications by using Scenario Builder.



Scenario Builder Interaction between ArcGIS, APDM and Gas Pipeline Simulator

The driving force behind this kind of work should always be to idealize a solution that will be simple, practical and provide a high general performance.

About the Authors:

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