NYSDOT Task 2.A Extension

Transit Schedule Data Exchange Architecture (TSDEA)

SDP Guidance Documentation

PART 3 – SDP Programmer's Guide

Version 1.0

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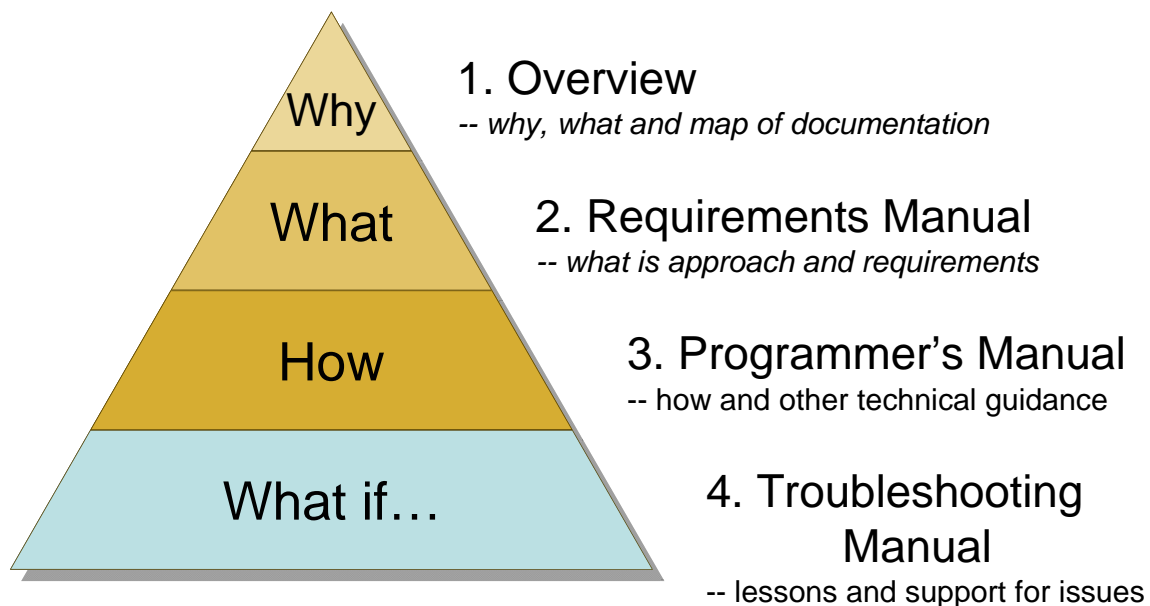
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1. Overview

1.1.   Purpose of Document

This SDP Programmer's Guide is intended to assist developers and technical users in understanding how to convert agency schedule information into SDP format to allow the efficient exchange of schedule information between agencies in the New York City region. Part 3 SDP Programmer's Guide contains several manuals that include tools, applications, physical databases, and XML Schema descriptions for implementation. Each Chapter is developed as a self-contained unit. Hyperlinks and file objects are embedded in the document for quick access.

All the applications and user manuals included in this document were tested, however, in the event of a problem, please send a bug report to: tsdea@consystec.com.

1.2.   Document Structure and Objectives

The SDP Programmer's Guide is meant to provide technical information on the SDP to technical users, System Integrators and Application Developers. In order to meet the needs of the varied set of stakeholders a series of four Guidance documents were developed, as shown in Figure 1.

Figure 1: Structure of SDP Four Guidance Documents

The four sets of documents provide increasing levels of detail in understanding SDP and performing conversion of agency data to the SDP standardized format.

- Part 1 is intended for Program Managers, Analysts, Developers, and System Integrators. It provides an overview of SDP, including a high level overview of SDP model, as well as a discussion of resources and a glossary.

- Part 2 is intended for Analysts and provides a more detailed framework & approach for the SDP, as well as a summary of the requirements that drove the development of the SDP.
- Part 3 is intended for Application Developers. It includes the data mapping approach, detailed conversion programs and user manuals, transformations, algorithms, "cheat sheets", as well as implementation guidance on developing a physical database and XML validation.
- Part 4 is intended for System Integrators and Developers. It answers implementation questions, addresses integration issues (i.e., FAQ), and suggests solutions to commonly encountered problems. [Note: Part 4 will be implemented as part of the ongoing SDP Operations and Maintenance.]

This document contains Part 3 – SDP Programmer's Guide.

1.3.   Programmer's Guide Organization

The SDP Programmer's Guide is divided into six stand-alone sections. Following this chapter, the Programmer's Guide contains five sections, including:

- Chapter 2: A Guide to Translating Native Data to SDP
- Chapter 3: Guidance on Building a Physical Database
- Chapter 4: Using the SDP XML Schema for XML Document Validation
- Chapter 5: Application Design Reference Manuals
- Chapter 6: SDP and Metadata

Each section may include hyperlinks to software, database or other large document. In addition, embedded files may be included in some chapters (e.g., the Application Design Reference Manual embeds six reference manual for six applications developed for the SDP).