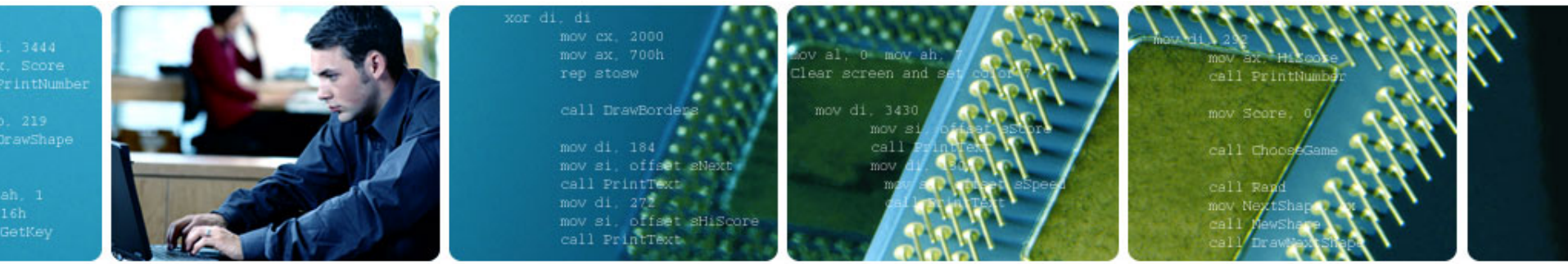
z/OS Basic Skills Information Center: ISPF Course Module

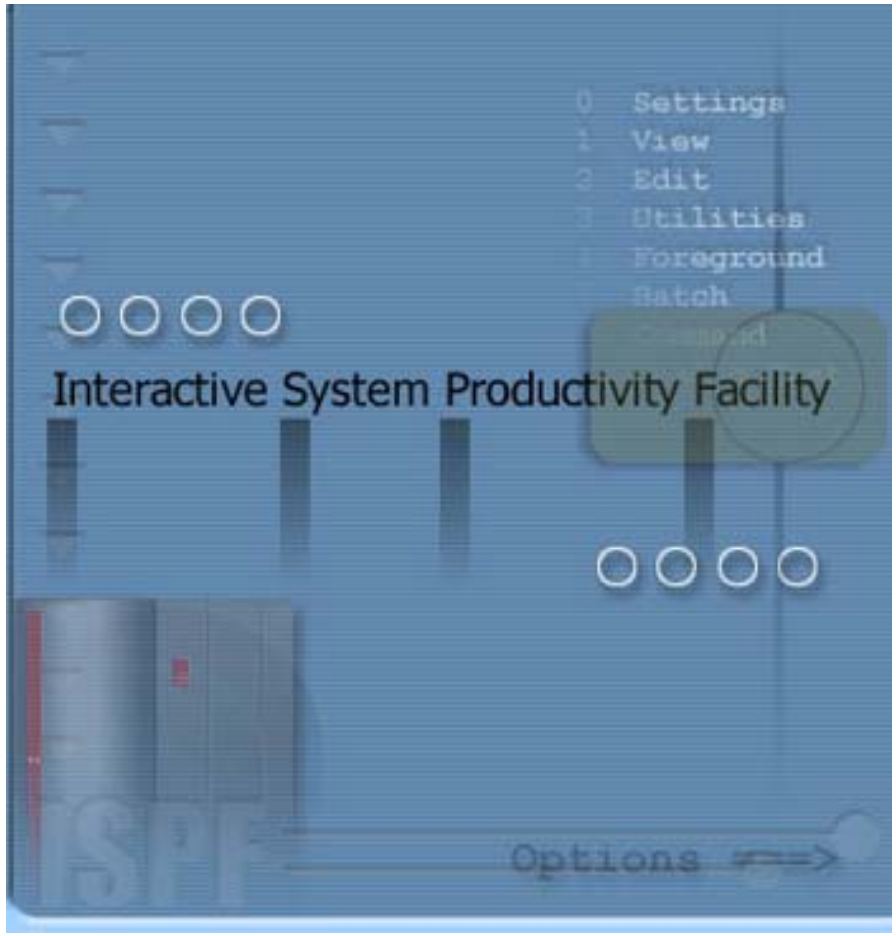
Module 1: Main Features of ISPF



Introduction

This module, Main Features of ISPF, introduces you to the z/OS Interactive System Productivity Facility, or ISPF, with special emphasis on the Program Development Facility, or PDF.

Time to complete: 10 – 15 minutes



Main Features of ISPF - Objectives

Upon completion of this module, you should be able to:

- **Describe the purpose of ISPF and its relationship to TSO**
- **List the four major components of ISPF**
- **Explain the function of each of the four components**

Main Features of ISPF – Purpose of ISPF

The Interactive System Productivity Facility, or ISPF, is a development tool set for the z/OS operating system. It has been used since 1975 to increase the productivity of the development of mainframe applications, because it provides an extensive set of programmer oriented facilities.

Main Features of ISPF – The Time Sharing Option/Extended (TSO/E)

The Time Sharing Option/Extended, or TSO/E, is a base element of IBM's mainframe z/OS operating system. TSO/E allows you to communicate interactively with the MVS operating system by typing commands (one line at a time) on a computer terminal.

ISPF can be seen as an extension to TSO/E. It is housed "under" TSO/E, and sometimes the acronym TSO/ISPF is used to describe the facility that these two closely associated subsystems provide. The services provided by ISPF complement those of the host TSO/E system to provide interactive processing. TSO/E is the command-line interface and ISPF is the menu interface to TSO/E commands.

Main Features of ISPF – ISPF Dialogs

ISPF facilitates the work of programmers and end-users by providing labeled fill-in-the-blank screens, called panels. The panels are arranged in a simple menu structure.

Applications produced through ISPF are called dialogs. ISPF provides services to the dialogs during their execution.

Main Features of ISPF – Customizing ISPF Dialogs

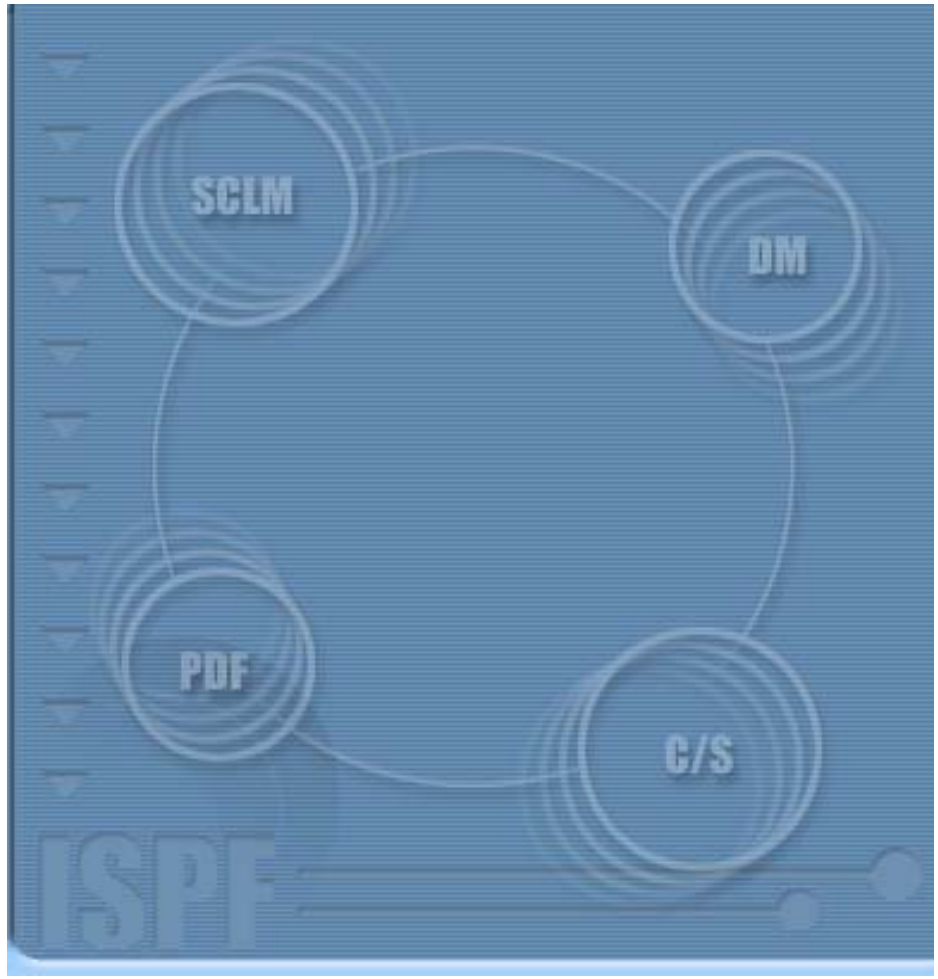
A programmer can use ISPF to produce custom dialogs and applications. Such dialogs run on a traditional IBM user terminal, like the 3270, or a terminal emulator running in a window on a PC.

A dialog receives requests and data from a user, then responds by using ISPF services to obtain information from, or enter information into, the z/OS system.

Main Features of ISPF – Four Major Components of ISPF

ISPF includes four major components:

- **Dialog Manager (DM)**
- **Program Development Facility (PDF)**
- **Software Configuration and Library Manager (SCLM)**
- **Client/Server (C/S)**



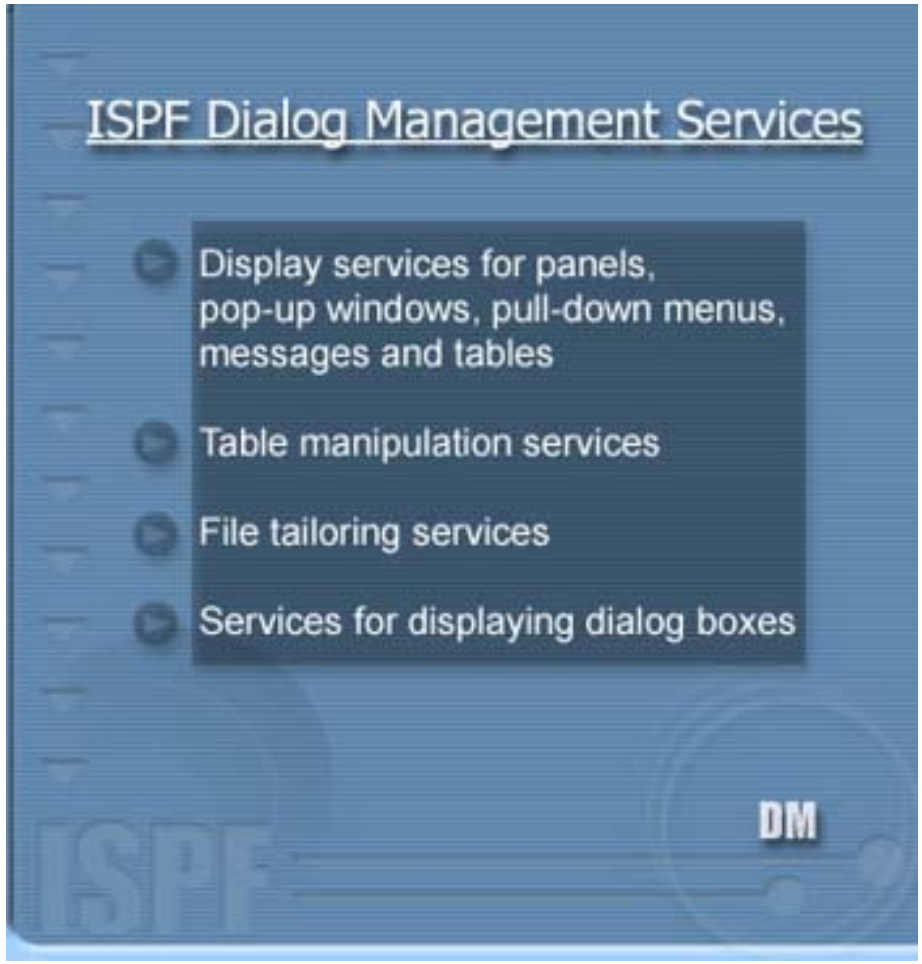
Main Features of ISPF – Dialog Manager

The Dialog Manager controls the interaction of a dialog's elements, and provides other services to dialogs during their execution. ISPF can issue requests to display panels and format screens. ISPF can store input, create output, process, and verify data. You can even use ISPF as a simple data management system.

Main Features of ISPF – The ISPF DM Services

The Dialog Manager (DM) provides services and dialogs, including:

- **display and variable services**
- **input and output**
- **user and application profiles**
- **table management**
- **system interface services**
- **dialog testing and debugging aids**



Main Features of ISPF – Program Development Facility (PDF)

The Program Development Facility (PDF) provides services to assist the developer of applications and dialogs, including:

- **Data set and catalog utilities**
- **View, browse, and edit functions**
- **TSO command interfaces**
- **Data set search and compare functions**
- **Programming library access services that include adding, finding, and deleting members, and displaying member lists**

Main Features of ISPF – SCLM

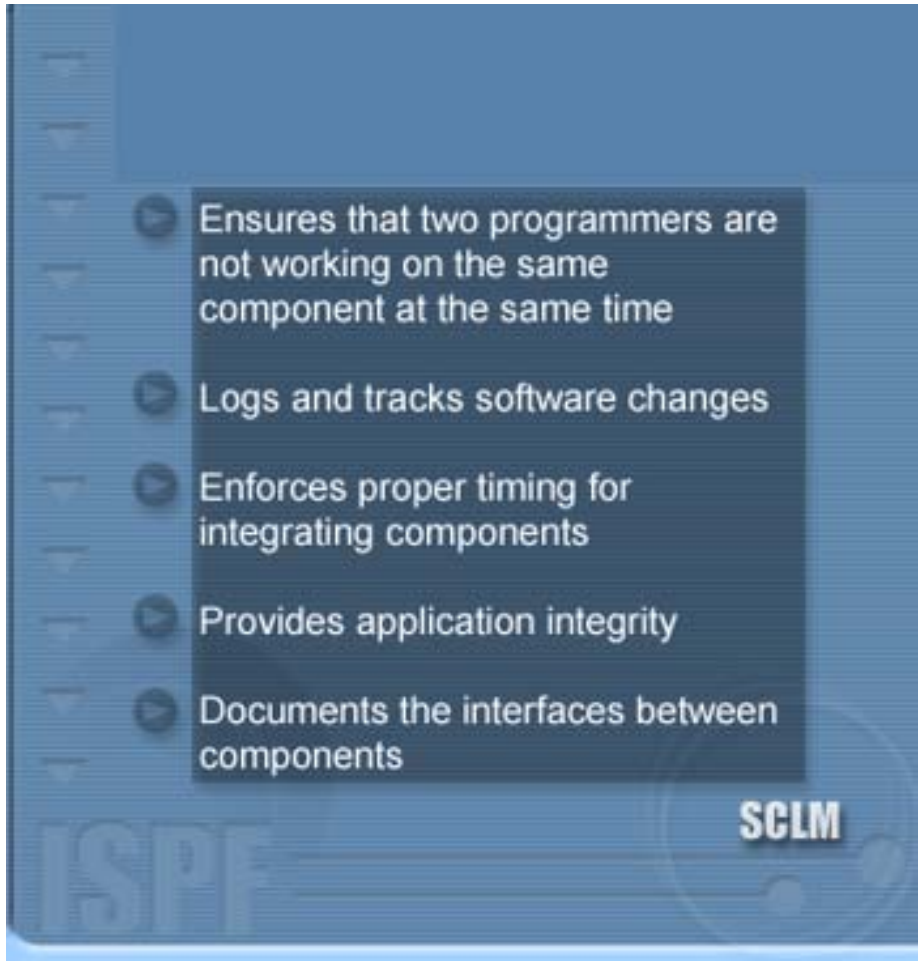
Software Configuration and Library Manager (SCLM) supports the development of complex software applications. It helps developers to track and update the components of a software project from the design phase to release of the final product.

The project manager defines the architecture for your application, relating all important components. SCLM ensures that the architecture definitions are followed by controlling and automating updates of related components.

Main Features of ISPF – The ISPF SCLM Functions

SCLM provides library and configuration management capabilities such as:

- **Tracking how all the pieces of an application fit together**
- **Calling the necessary compilers, assemblers, or other translators**
- **Promoting application components through the different stages of the development cycle, and linkage editors**
- **Auditing changes to the components**
- **Saving versions of the components as they are updated**

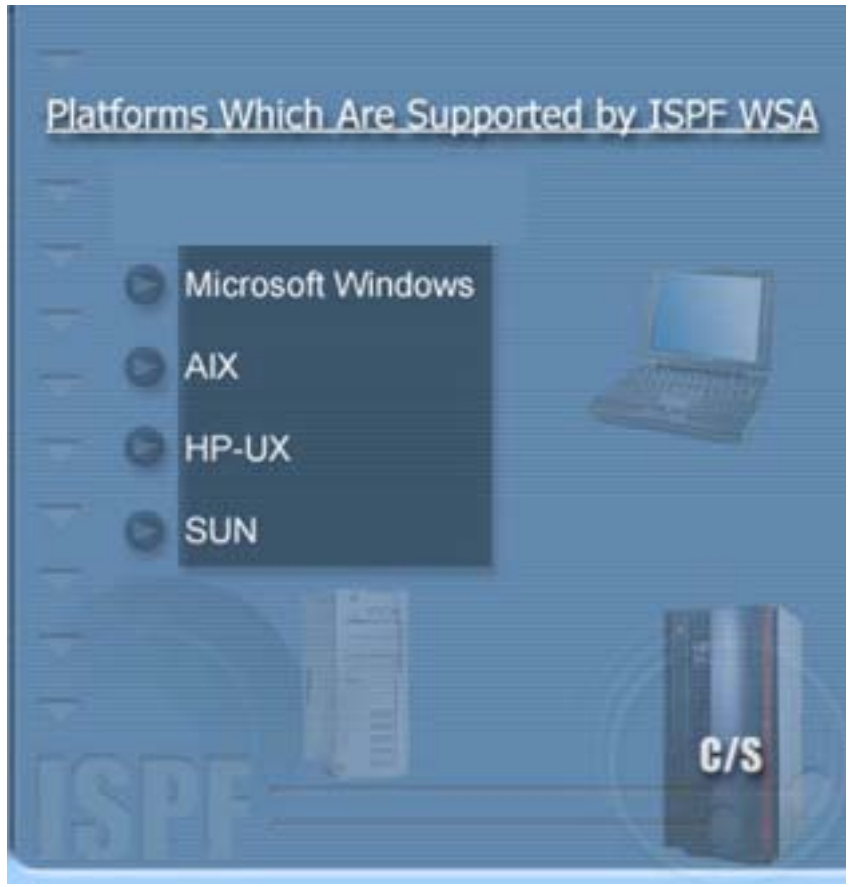


Main Features of ISPF – Client/Server (C/S)

The Client/Server (C/S) part of ISPF allows you to run ISPF on programmable workstations and PCs under Microsoft Windows or UNIX.

You can display panels using the display function of the workstation operating system. For example, on a workstation running Microsoft Windows, panels are rendered possessing the look and feel of all typical windows.

The core component of ISPF, which facilitates this, is called the Workstation Agent (WSA).



Main Features of ISPF – Summary

In this module, Main Features of ISPF, you learned:

- **The relationship between ISPF and TSO/E**
- **That ISPF provides labeled fill-in-the-blank screens called panels to facilitate the work of programmers and end users**
- **The four major components of ISPF (Dialog Manager, Program Development Facility, Software Configuration Library Manager, and Client/Server) and the services each provides**