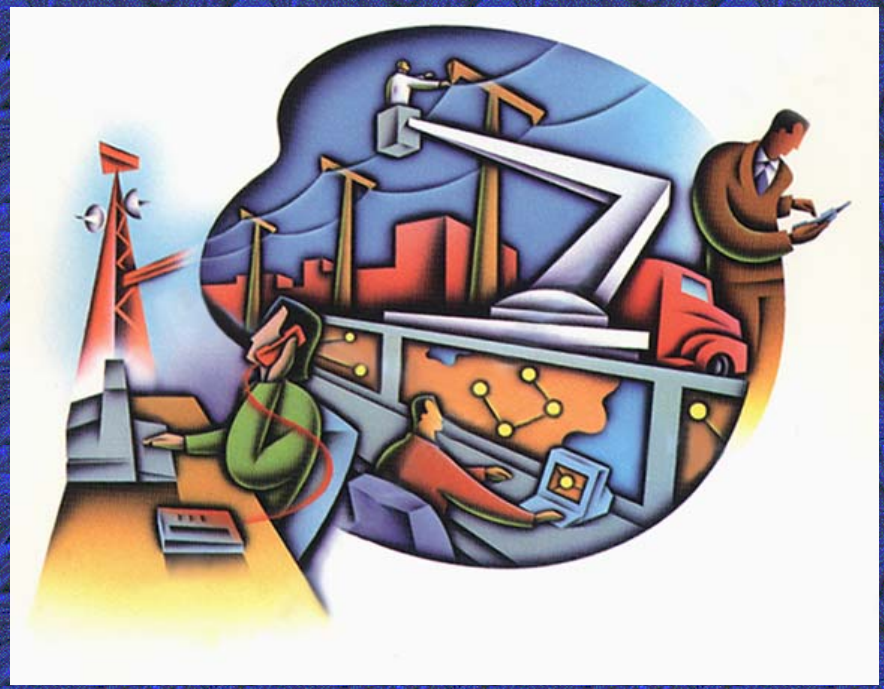
INTELLIGENT NETWORK



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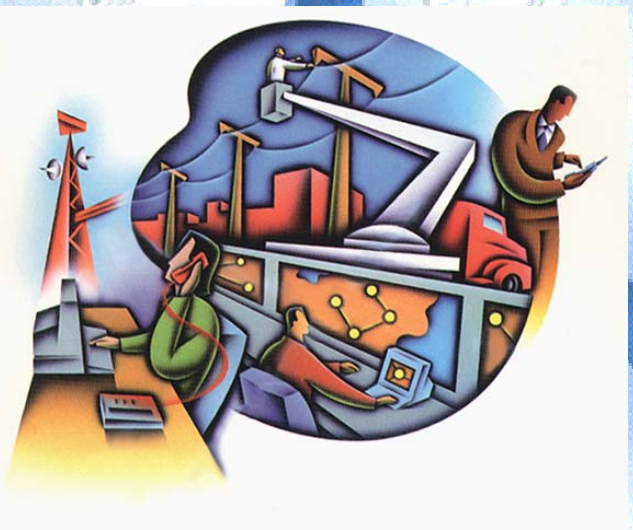
Network Knowledge Solutions℠

Resources

Globally located for Planning, Integration and Operations

Skills

- **Consulting**
  - Services Marketing
  - Business & Strategy Planning
  - Customer Care
  - Network Planning & Operations
  - Communications Security
- **Integration**
  - Network Node
  - Broadband CATV Network
  - Data Network
  - Telephony & Advanced Telephony
  - Internet
  - Information Systems
  - Voice Messaging
- **Operations**
  - Telecom



Typical Projects

- Asia PTT Internet Arch. Consulting
- Telephony Integration for US and European CATV Companies
- IN Network Integration for European PTT
- ATM Planning for RBOCs & PTTs
- Broadband service trial for Canadian Carrier
- Data communications unit established in South America
- Internet Access Gateway Optimization for RBOC
- OS Integration/Consolidation for RBOC
- Network & Systems Integration for Major Middle Eastern PTT

Partners

IBM
Microsoft
AT&T Solutions
Trinity
Bechtel
Claremont
Oracle
Saville
Tracom

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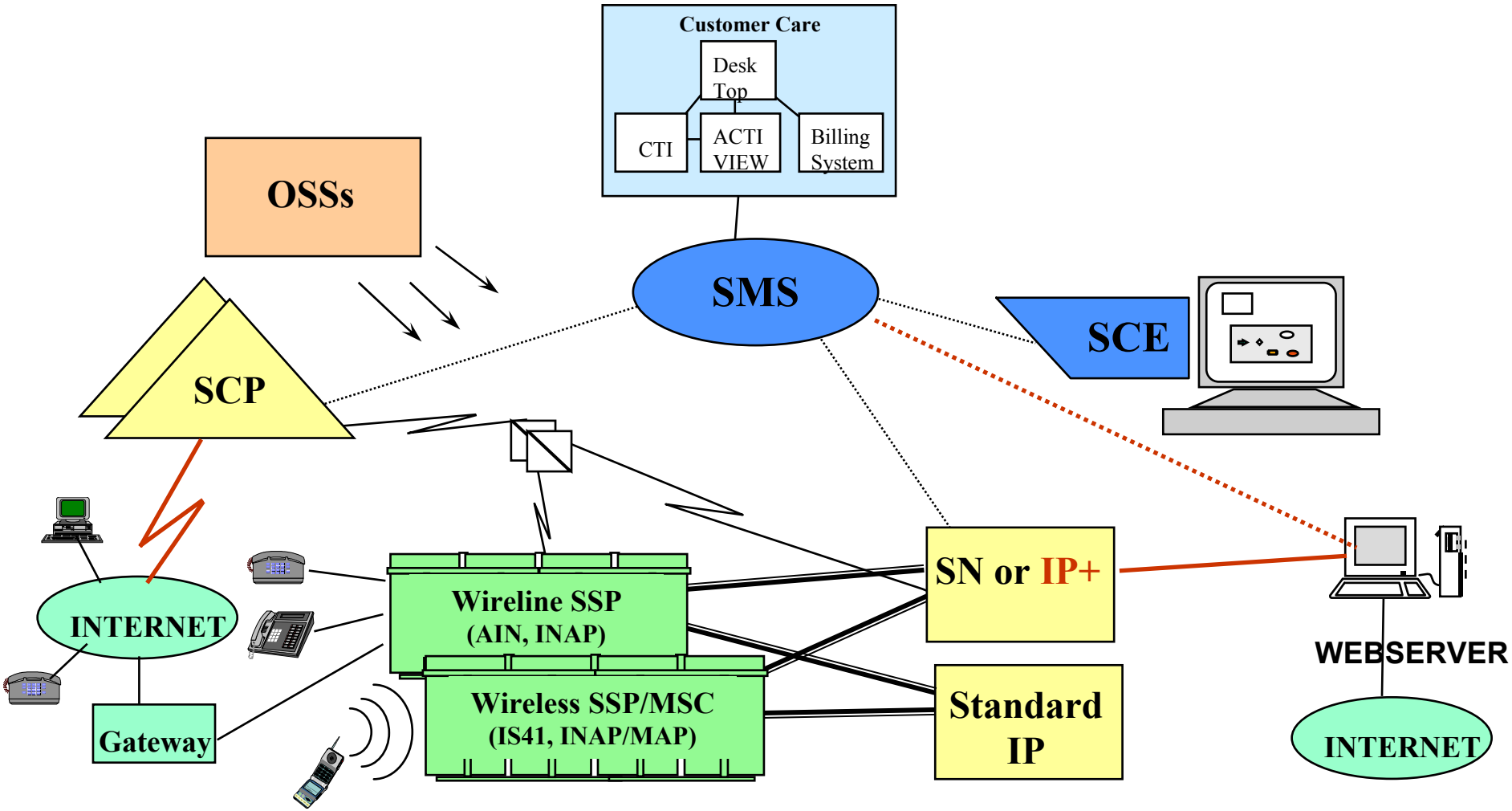
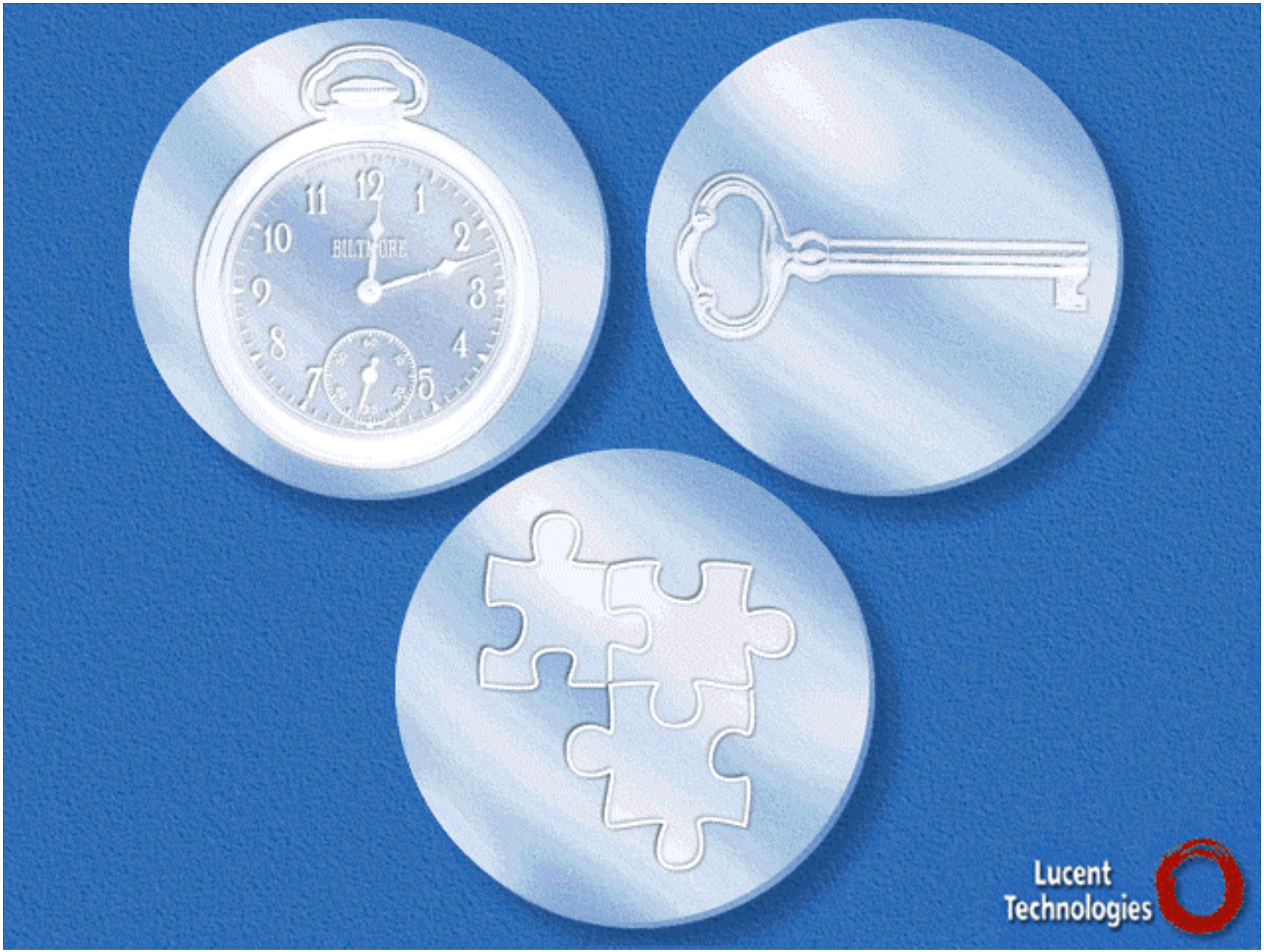
Intelligent Networking

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ACCESS

to Network Data and Logic

Manages large amounts of IN data and logic

Offers single entry point

Many secure ways to access data and logic

Satisfies end customer access needs

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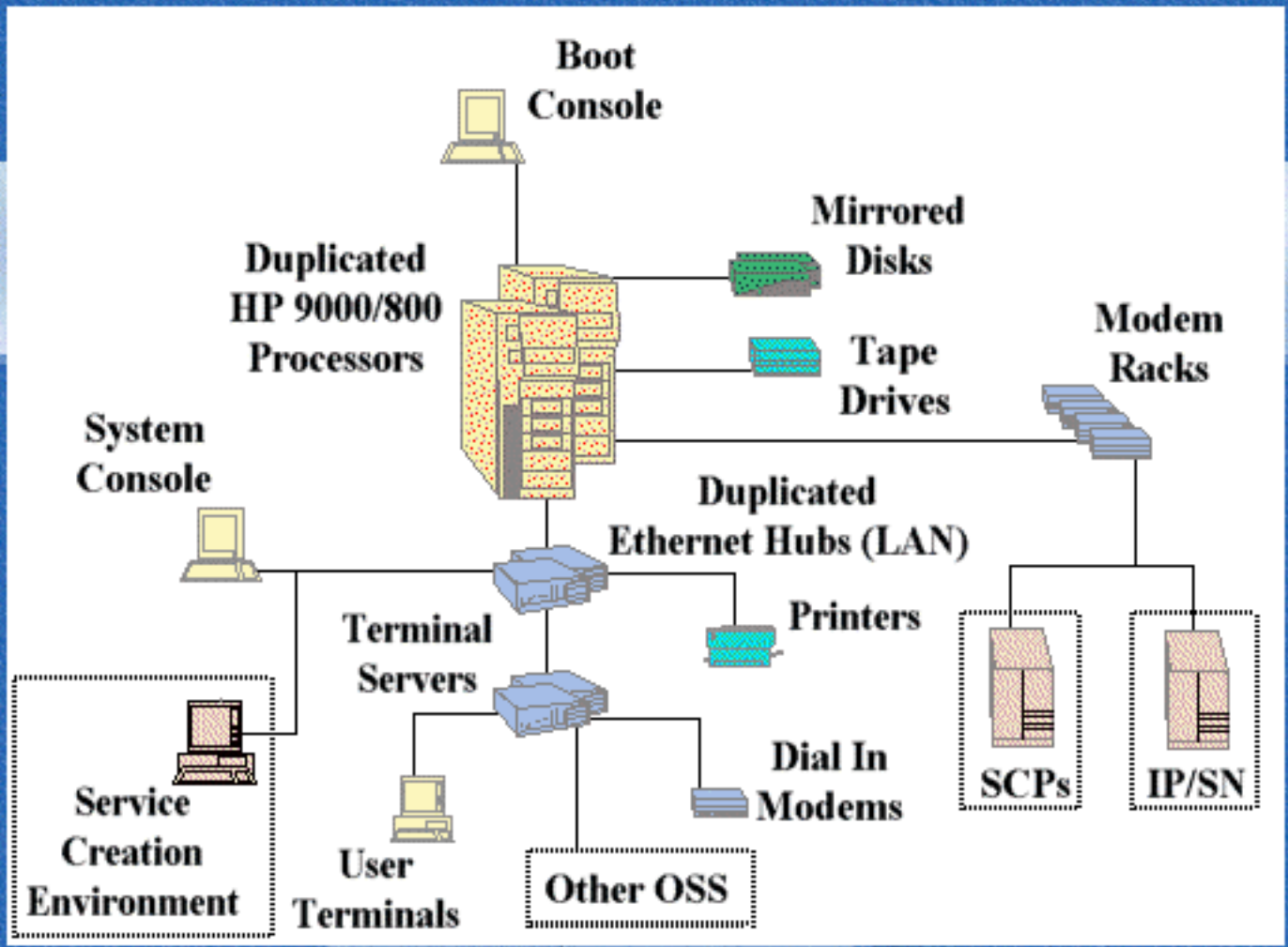

Menu

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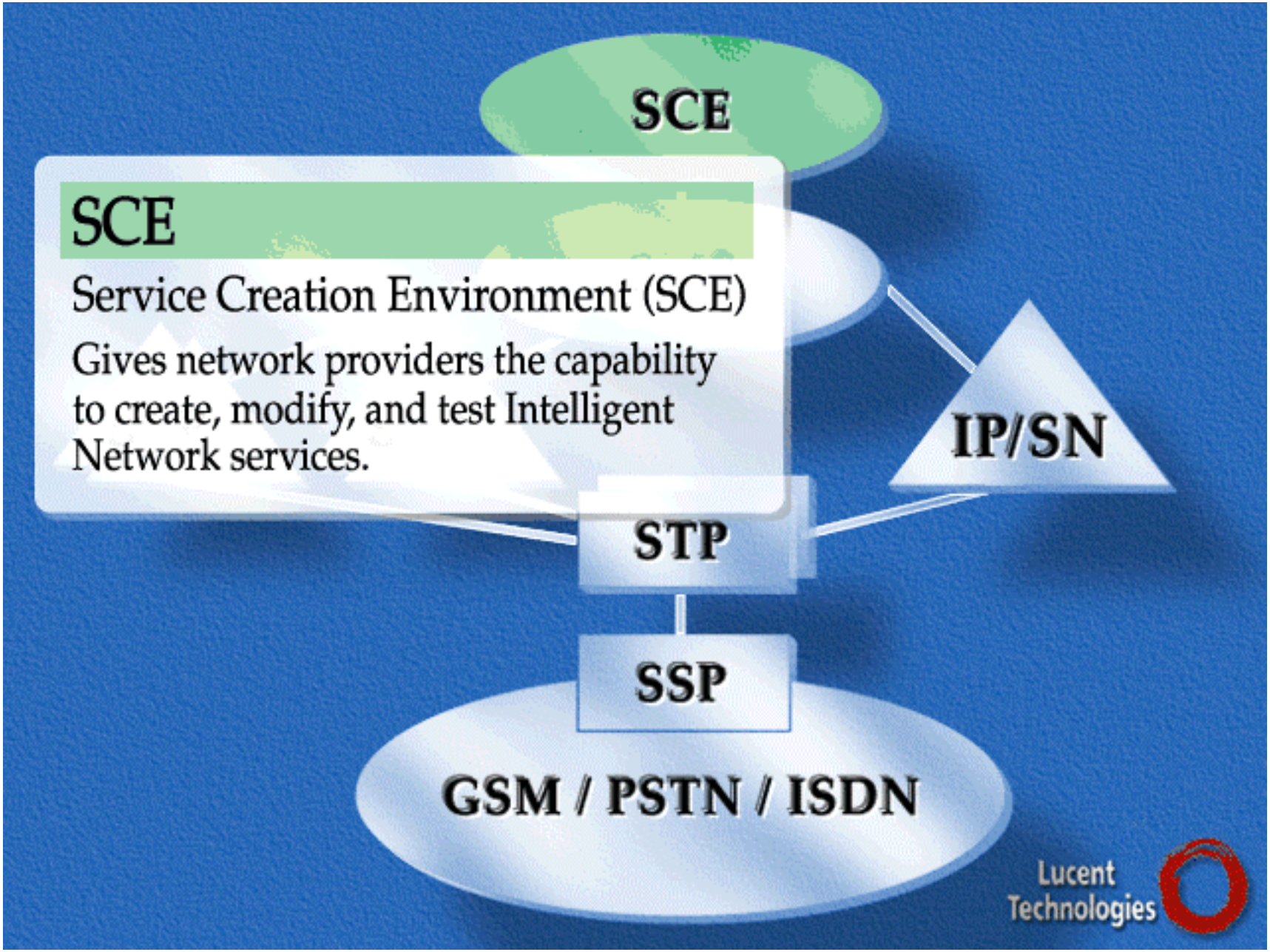
SCE
SCE
Service Creation Environment (SCE)
Gives network providers the capability to create, modify, and test Intelligent Network services.
IP/SN
STP
SSP
GSM / PSTN / ISDN
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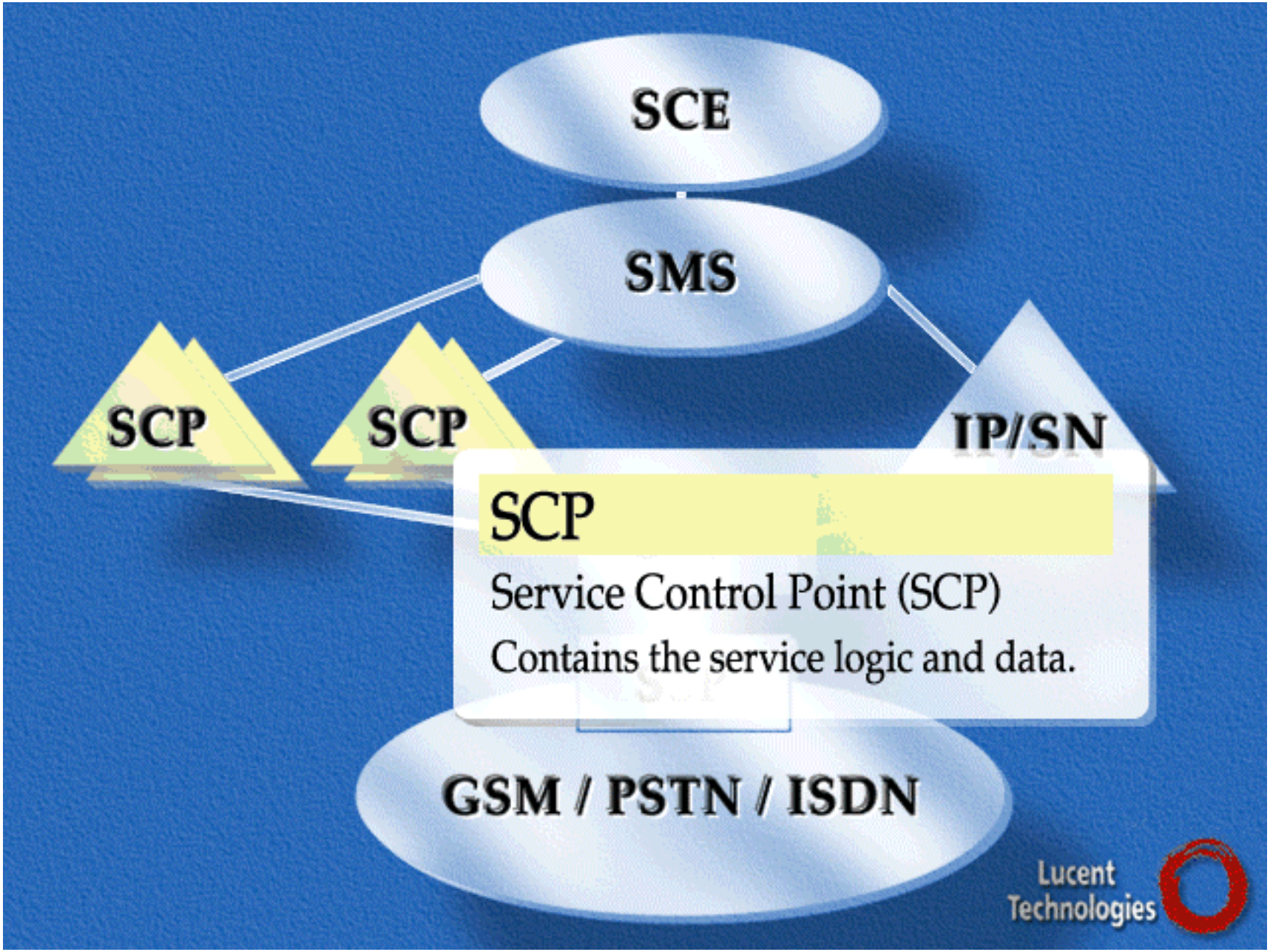
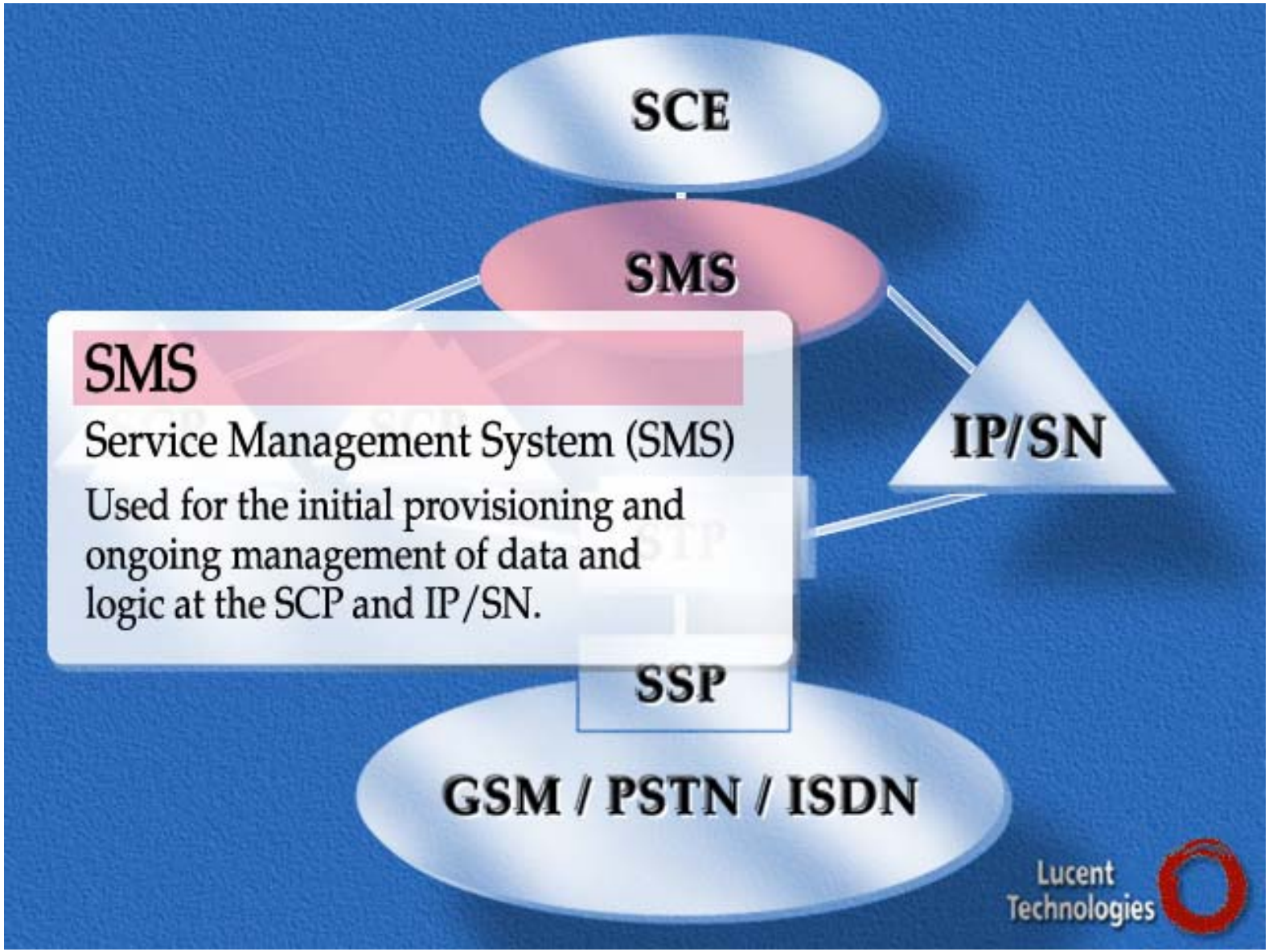
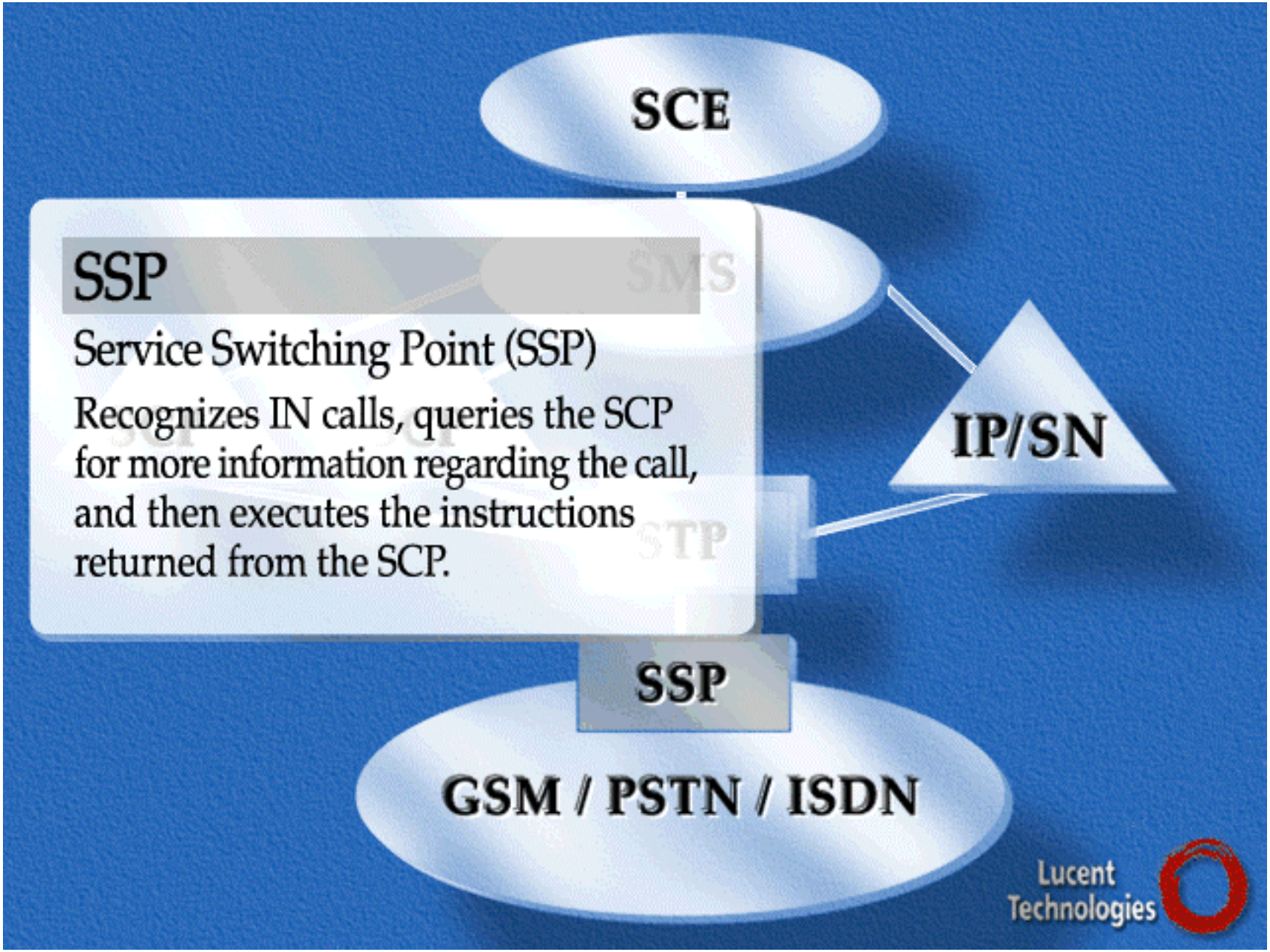

SCE
SMS
SCP
SCP
IP/SN
SCP
Service Control Point (SCP)
Contains the service logic and data.
GSM / PSTN / ISDN
Lucent Technologies



SMS

Service Management System (SMS)

Used for the initial provisioning and ongoing management of data and logic at the SCP and IP/SN.


SCE
SSP
Service Switching Point (SSP)
Recognizes IN calls, queries the SCP for more information regarding the call, and then executes the instructions returned from the SCP.
IP/SN
SSP
GSM / PSTN / ISDN
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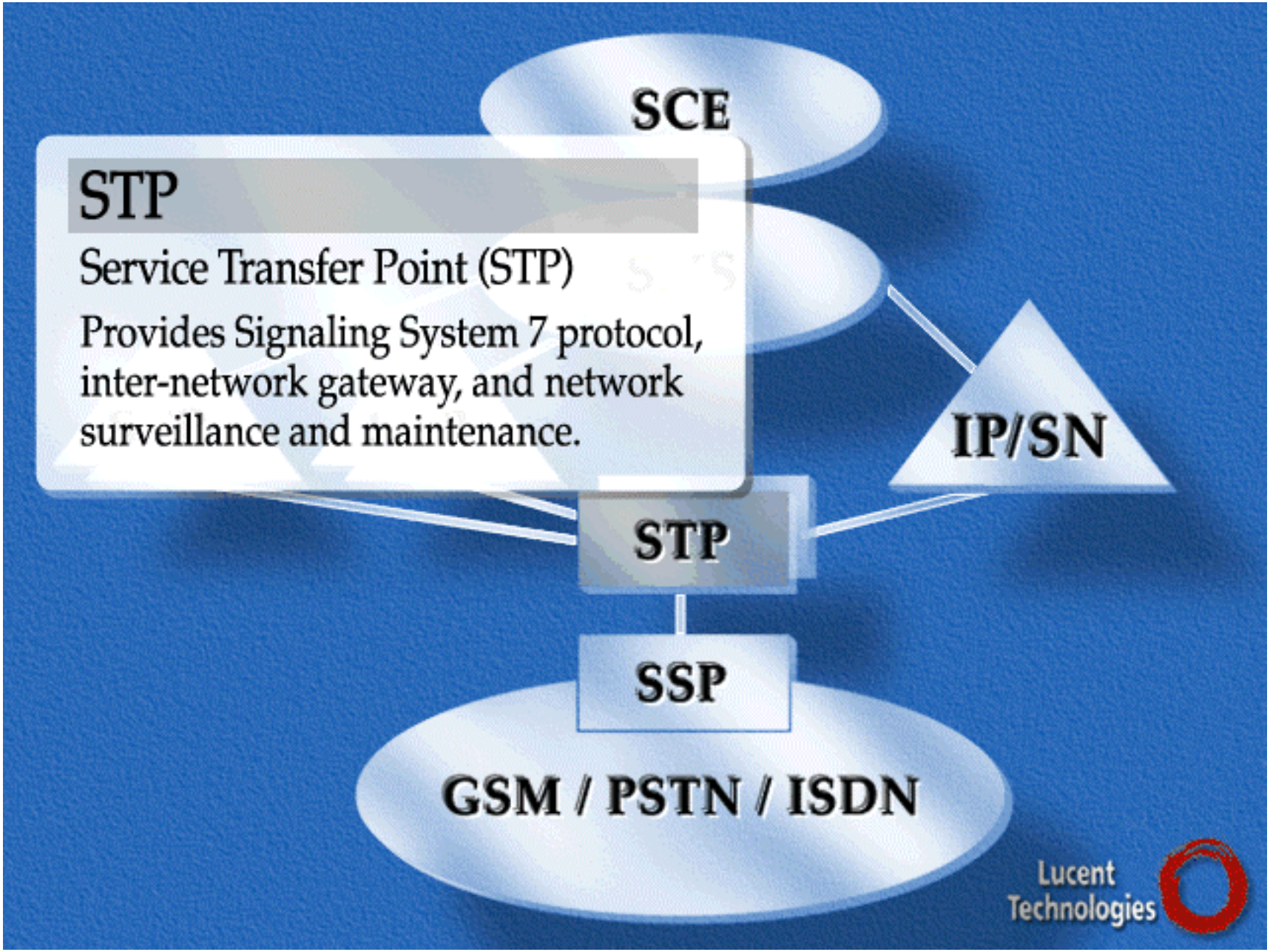
SCE
STP
Service Transfer Point (STP)
Provides Signaling System 7 protocol, inter-network gateway, and network surveillance and maintenance.
IP/SN
STP
SSP
GSM / PSTN / ISDN
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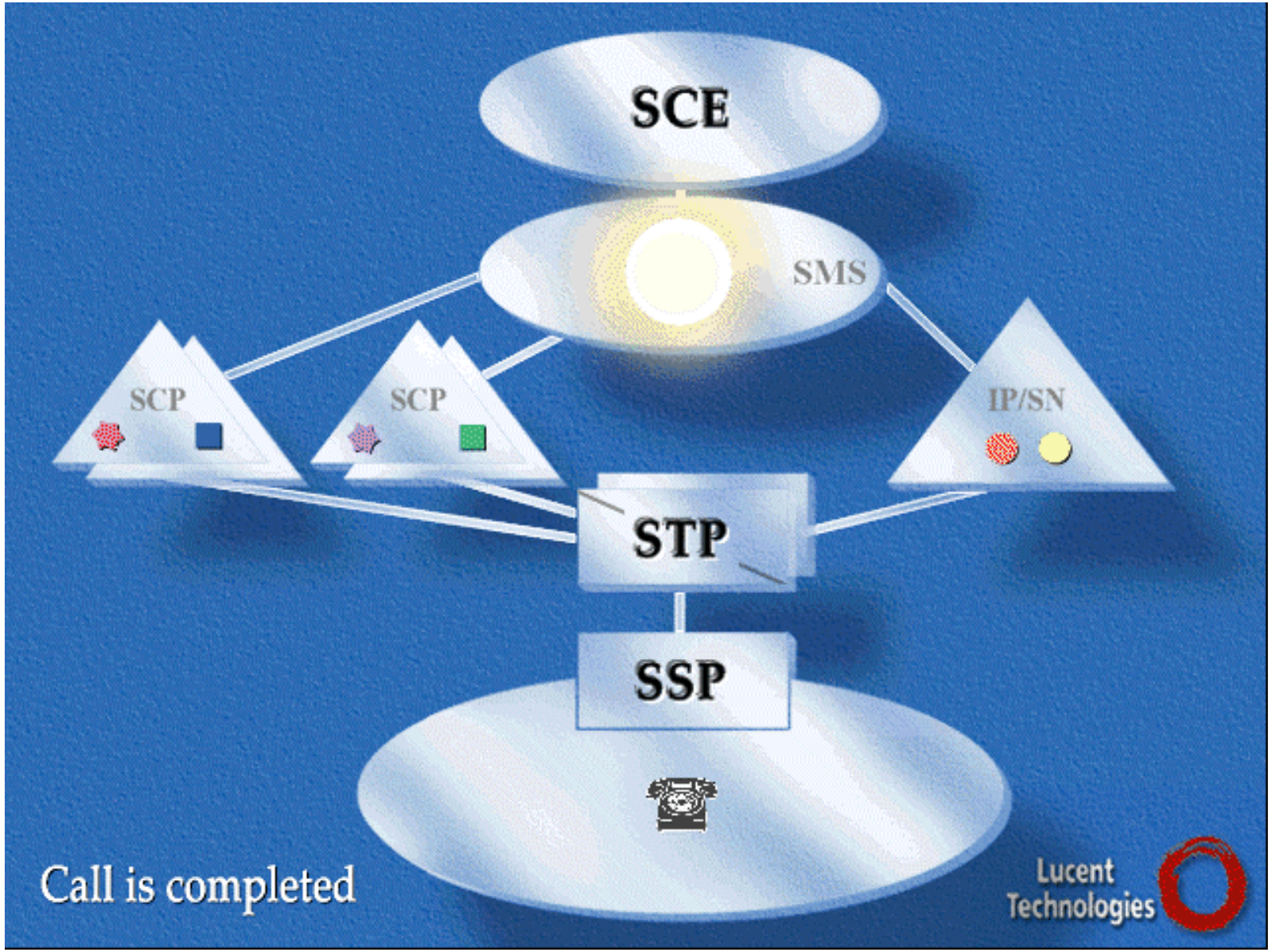
SCE
SMS
SCP
SCP
IP/SN
STP
SSP
Call is completed
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Technologies

Lucent Technologies
Bell Labs Innovations

SMS

Service Management System

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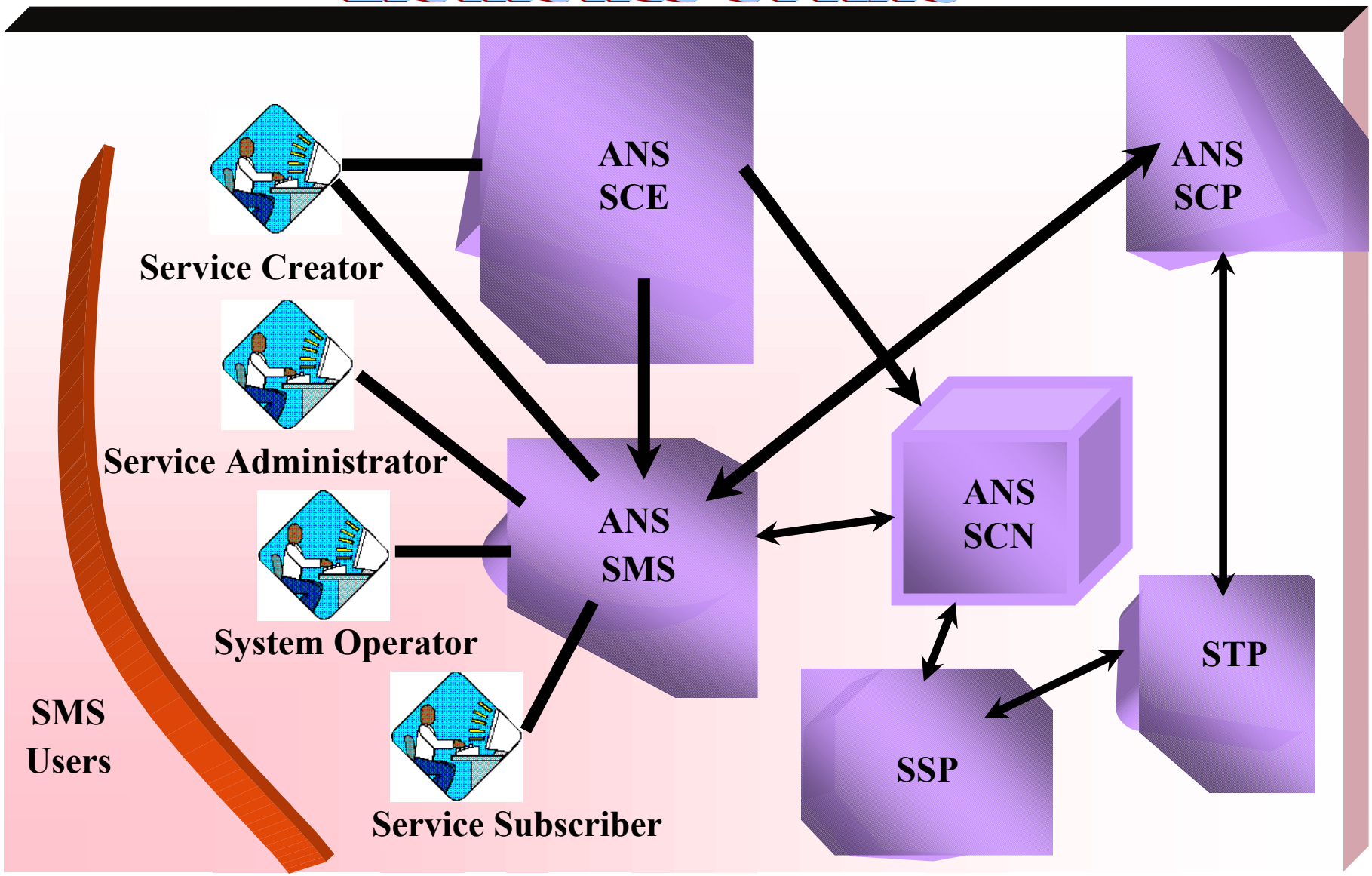
Elements of ANS



Service Packages and Subscribers

Subscribable Services

An SP consists of one or more subscribable services.

Examples are:

- **Automatic Number Identification (ANI)**

Security

- **Multi-Location Extension Dialing**
- **Incoming Call Screening**

Service Package Data

Introduction

SPs can be structured in a variety of ways, allowing flexibility in meeting subscriber needs.

SMS DATA ADMINISTRATION

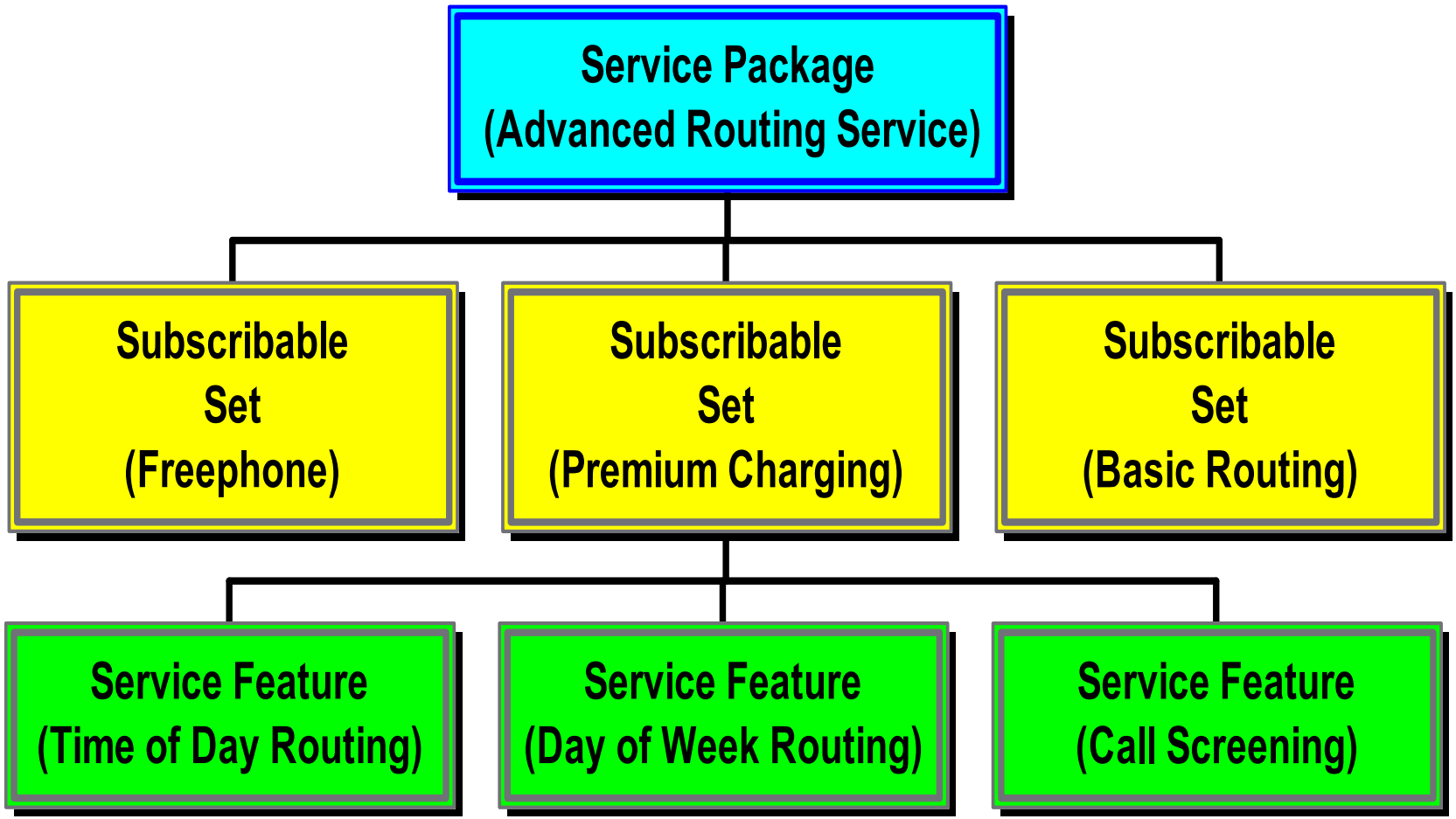
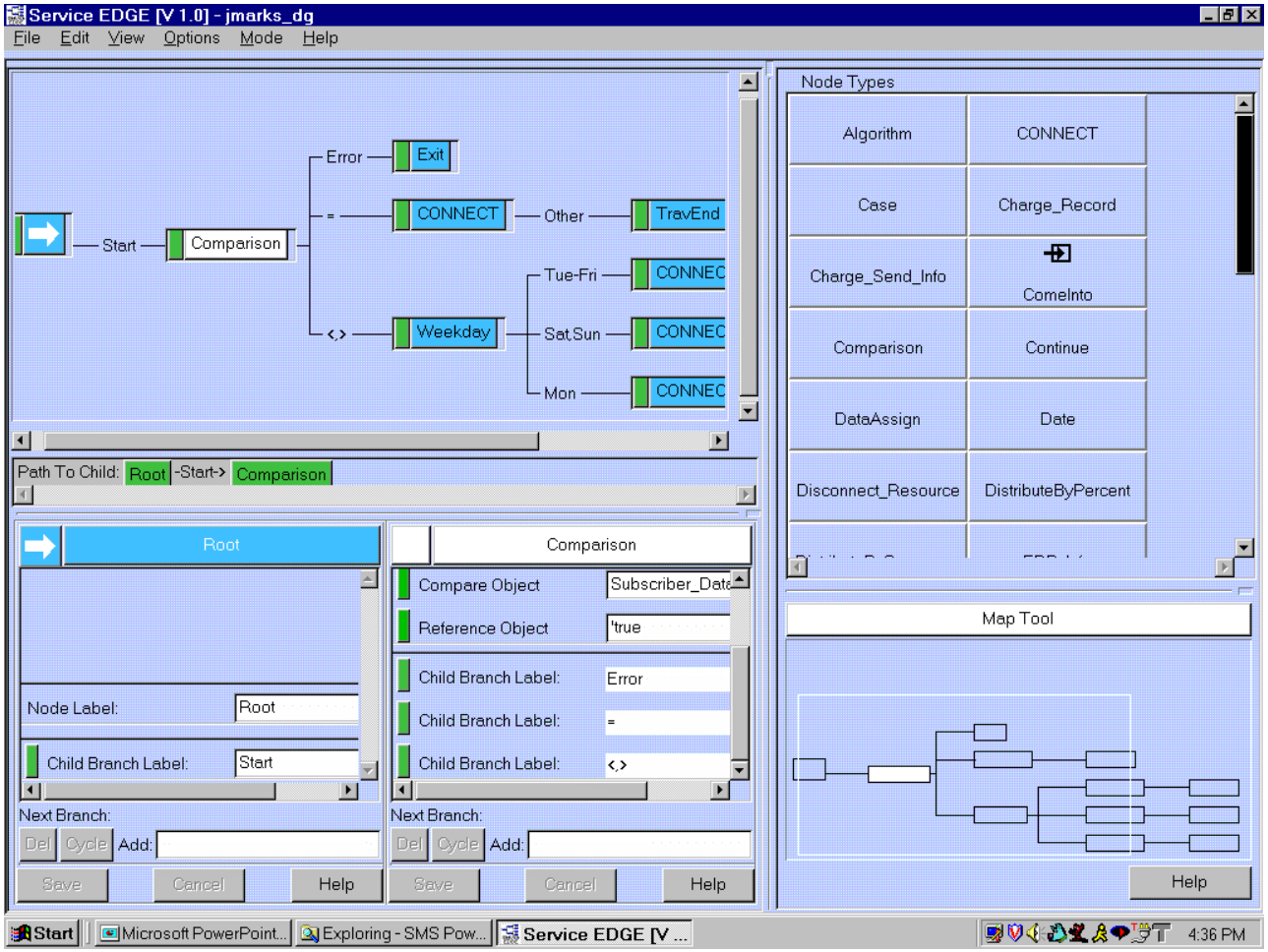


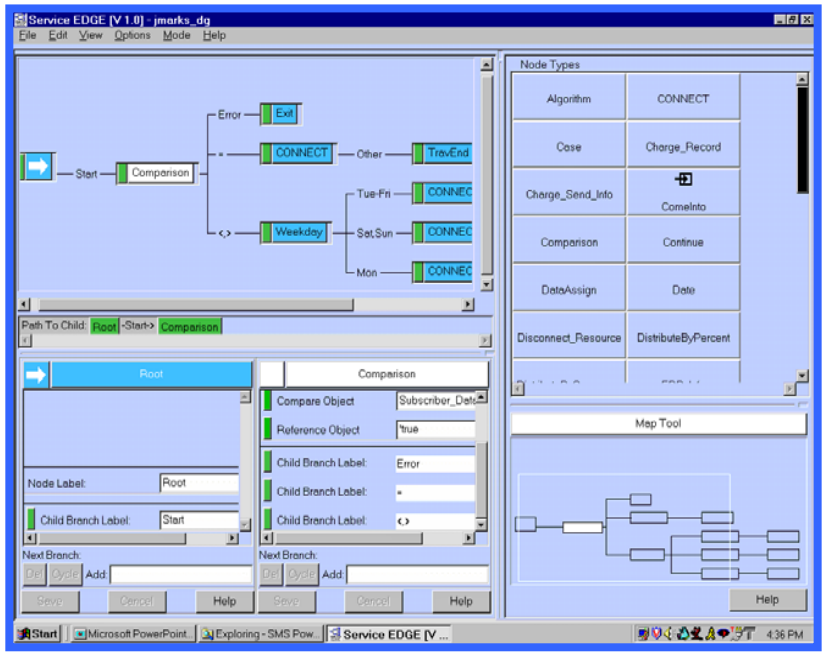
Figure 1-3 SP Services and Features

DECISION GRAPHS



A decision graph is a visual representation of service logic which can be customized for a subscription or service and distributed to SCP(s) by SMS.

DECISION GRAPHS



Decision Graphs -- DGs determine call treatments based on call parameters and other subscriber data. The DG is a set of nodes at which:

- **A decision is made regarding call processing logic flow**
- **An action is taken in call processing logic.**

Each node represents a request for a call processing resource or a logical decision.

DGs are optional. Not all SPs have DGs.

Global Partitions

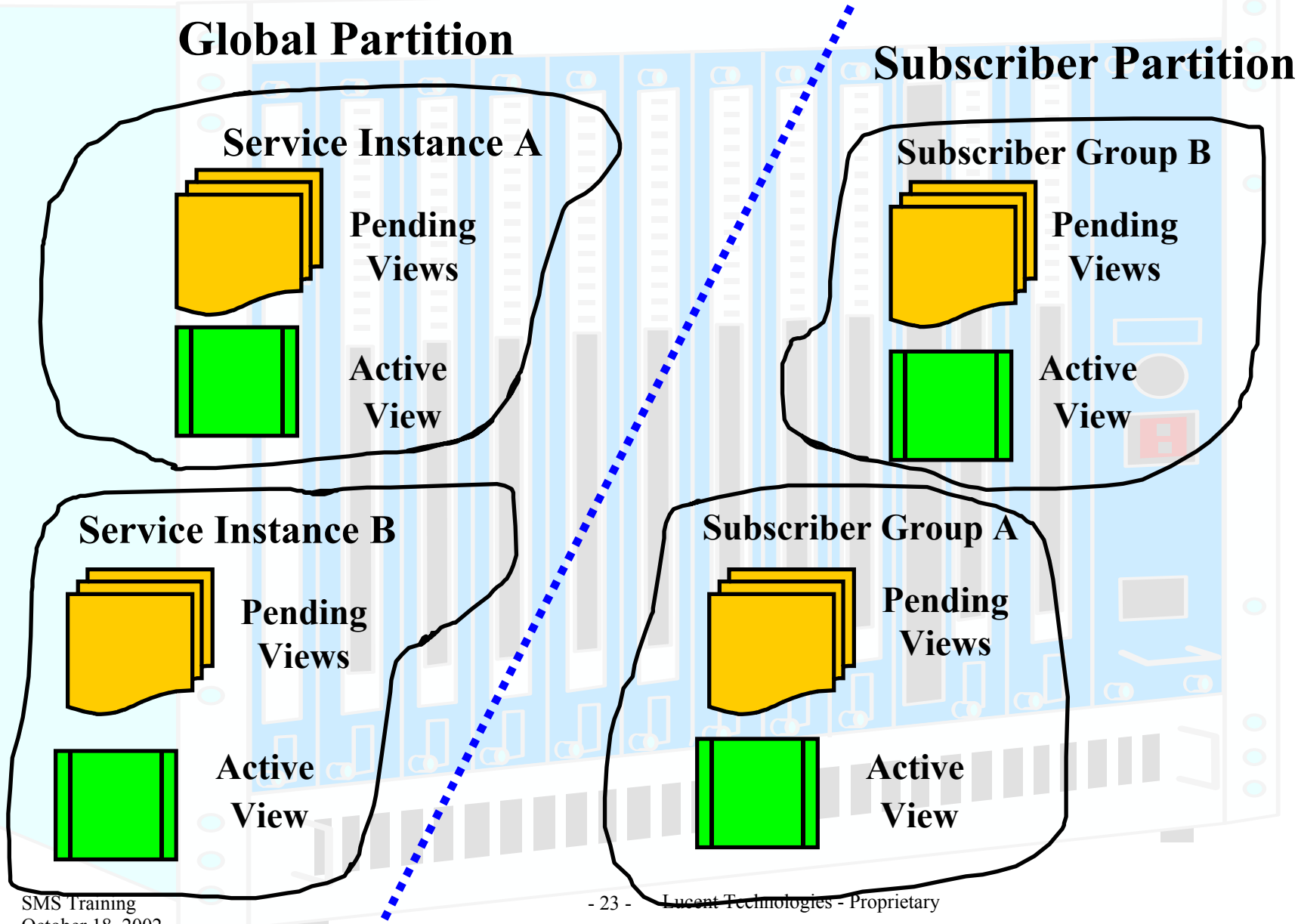
Global partitions hold data that is used by any or all of the subscribers in the SP. Only designated SMS administrators can work with the data in global partitions.

Subscriber Partitions

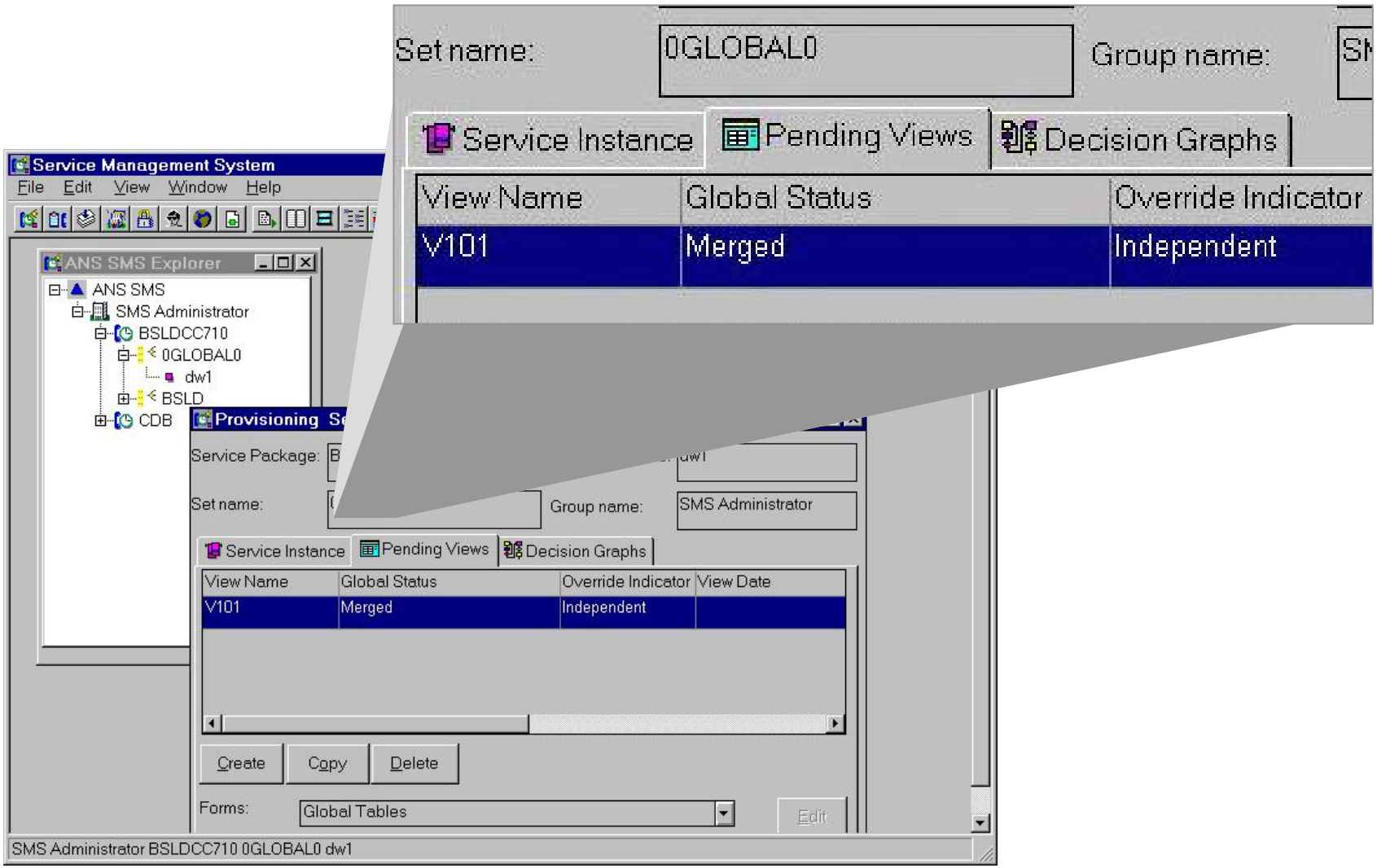
Subscriber partitions hold data for specific customers in an SP.

Users in different subscriber groups cannot look at or access each others' data. Subscriber-specific data can be accessed only by the authorized subscriber, and authorized SMS Administrators.

Partitions


Global Partition
Subscriber Partition
Service Instance A
Pending Views
Active View
Subscriber Group B
Pending Views
Active View
Service Instance B
Pending Views
Active View
Subscriber Group A
Pending Views
Active View

SMS PCGUI PENDING VIEWS



Provisioning Flow

1. User views data currently in the database

Active View:

copy of service data in SMS

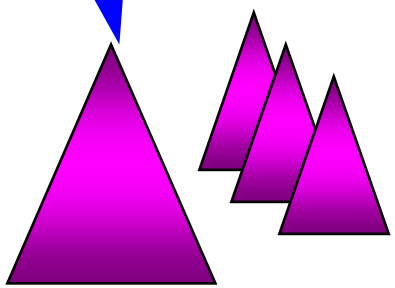
2. User edits data to form pending view

Pending View:

edited data

3. User merges pending view into database

4. SMS loads the new data to the SCPs

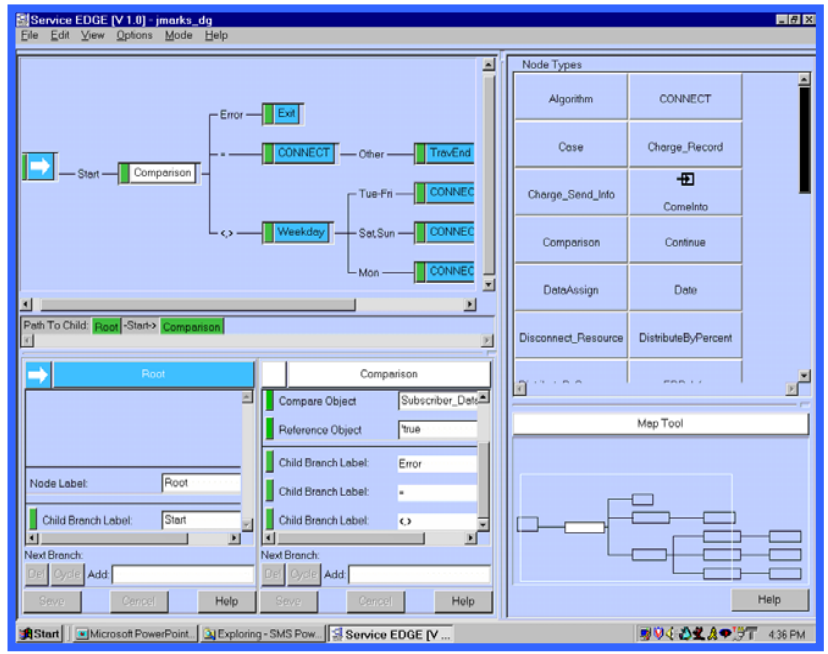


SCPs

Lucent Technologies - Proprietary

Decision Graphs

- Decision Graphs may be loaded to the SCP if they have been amended in-line with the service data
- If they are loaded together with the data, this is called **CO-ORDINATED LOADING**



Decision Graphs

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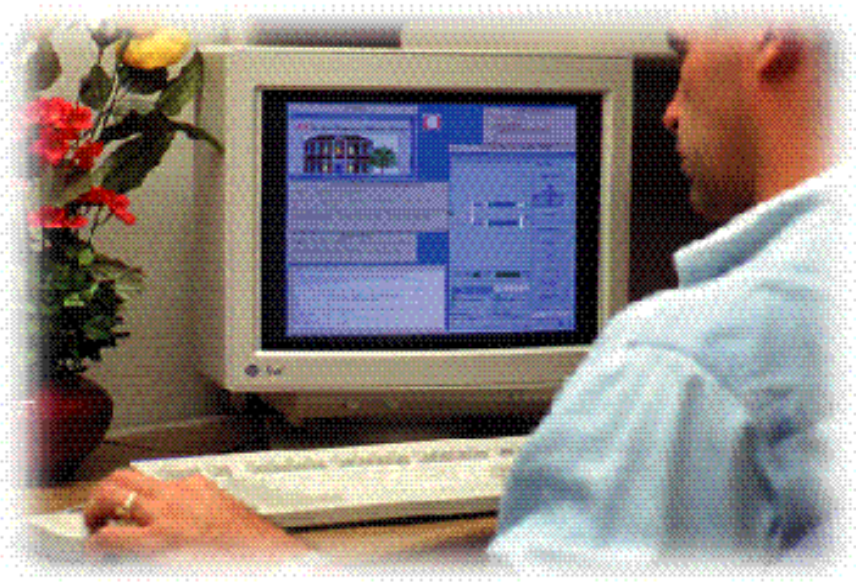
CO-ORDINATED LOADING



Initial Service Set Up

GSI Process Flow

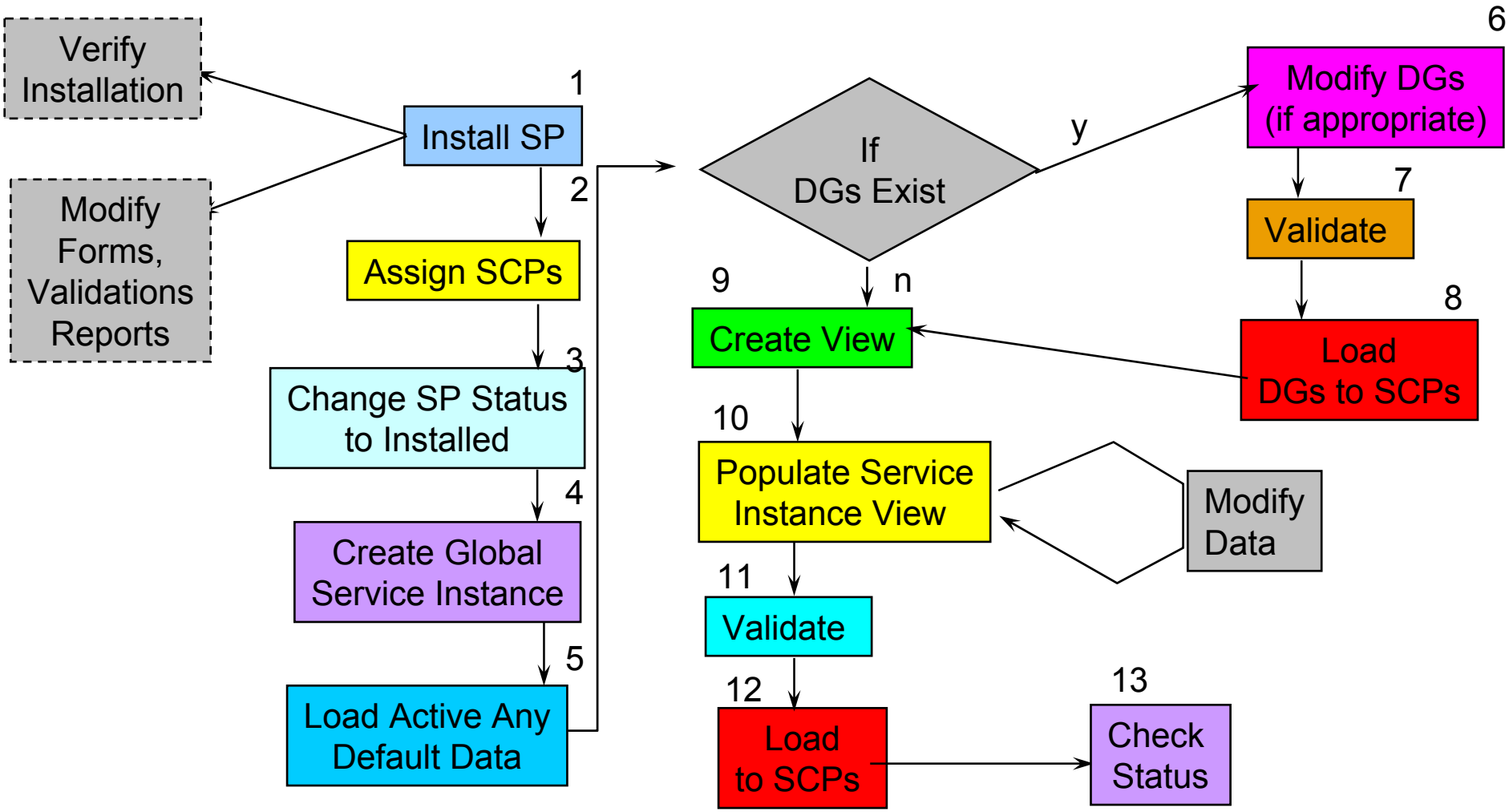


Figure 1-6

Process Flow for the SSI

This table describes a high-level process flow in Figure 1-7 for working in an SSI, if one exists for the SP.

Step	Description
1	Access to the SSI environment
2	Creation of SSI if necessary
3	Validation of DGs if modified
4	Loading of DGs if present
5	Creation of a Pending View for the SSI
6	Population/editing of the View for the SSI
7	Validation of Pending View
8	Distribution of Pending View to NEs
9	Status check for verification of merge

Working With Subscriber Data

SSI Process Flow

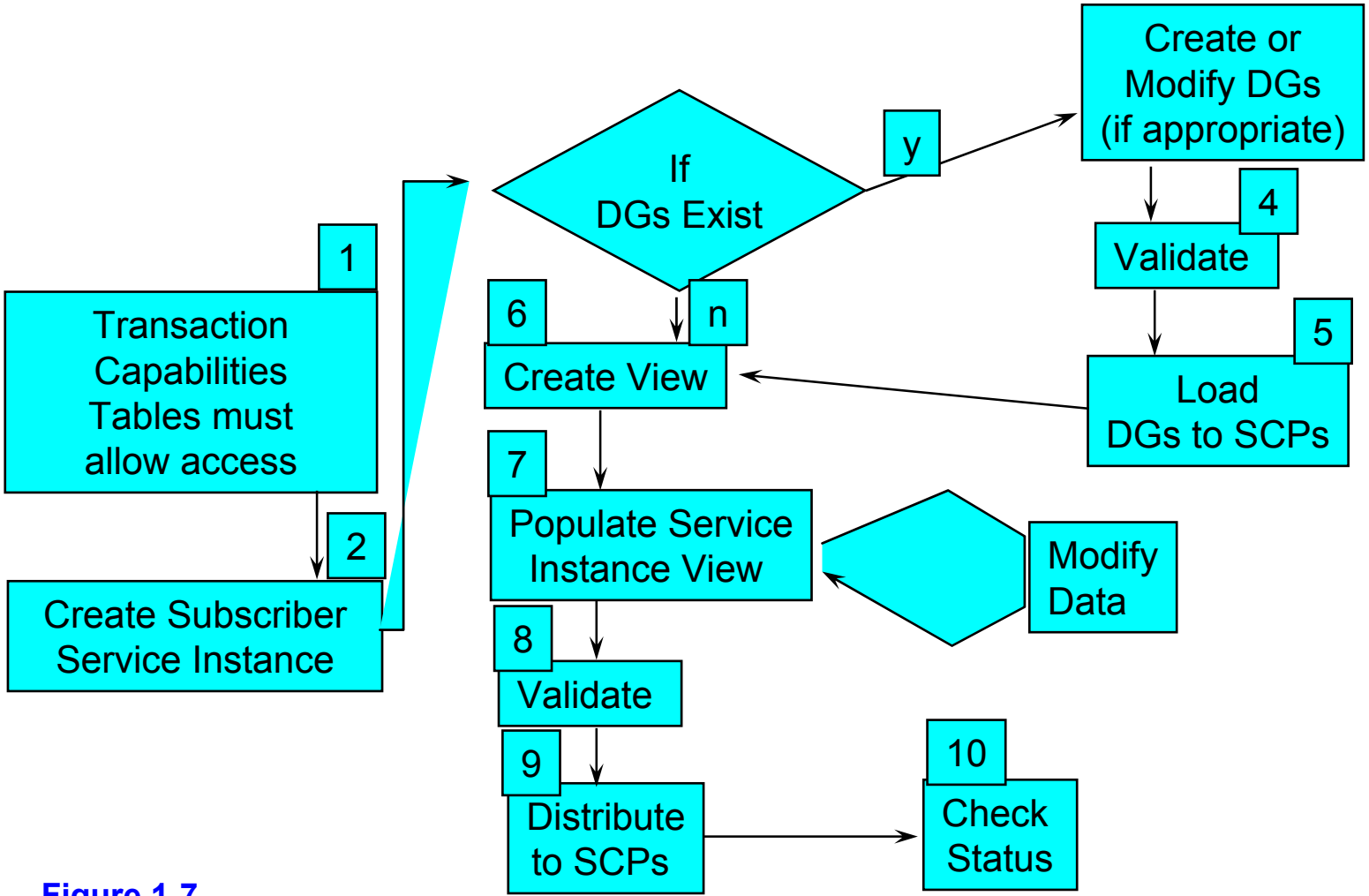
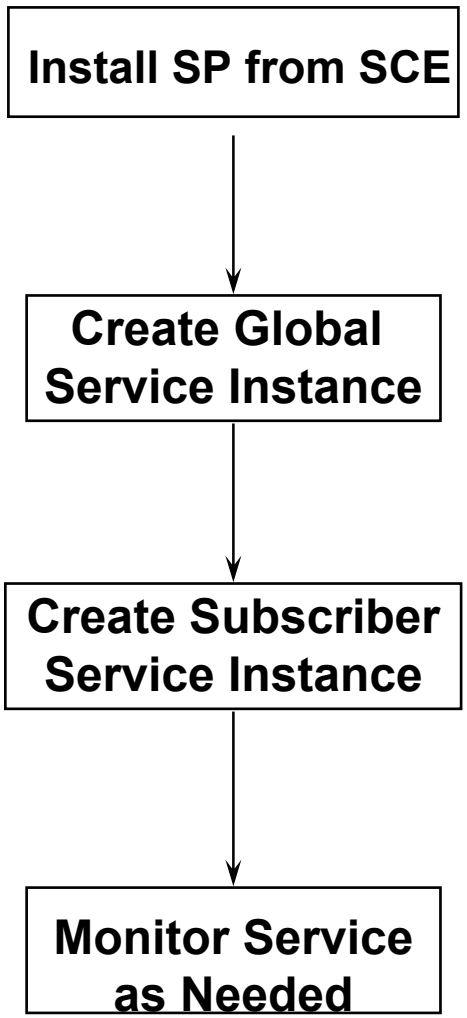


Figure 1-7

High Level View of Installation and Provisioning



- Installation procedures produce SP "under test"
- Attach customization - forms, validations, reports
- Configure SP parameters (ex: max records)
- Assign SCPs

- Create Pending View
- Edit Decision Graphs, Validate, Send
- Populate table records
- Validate and Send Pending View

- Create Pending View
- Edit Decision Graphs, Validate, Send
- Populate table records
- Validate and Send Pending View

- Repeat steps of View creation, population, validation, and sending
- Request reports
- Request service audits

The End