

# Telecommunications Overview



Advanced Telephony Unit  
Federal Bureau of Investigation

Disabling...

b7c

Declassify on: OADR

la #3

# Purpose

To Provide an Overview of the Telecommunications Environment and  
its Implications for Law Enforcement

# IMPACT OF EMERGING TELECOMMUNICATIONS TECHNOLOGY ON LAW ENFORCEMENT

- o The Nation's telecommunications systems and networks are often used in furtherance of serious criminal activities.
  
- o Recent and continuing advances in telecommunications technology and the introduction of new technologies and transmission modes have made it increasingly difficult for Federal, State and local law enforcement agencies to enforce the criminal law through a key investigative technique--statutory-based, court ordered electronic surveillance.

~~SECRET~~

# CHALLENGE TO LAW ENFORCEMENT

- o These technologies present a two-fold challenge to law enforcement:
  - o 1) The ability to access communications subject to court authorized intercepts (Digital Telephony Legislation); and
  - o 2) The ability to gather and analyze evidence from these interceptions on a real-time basis (National Encryption Policy Issue).

## LEGISLATIVE HISTORY

- o In 1968, Congress, after carefully considering the constitutional issues between the Government's need to effectively investigate serious criminal conduct and an individual's right to privacy, passed the Omnibus Crime Control and Safe Streets Act. (Amended in 1986 - Electronic Communications Privacy Act - 18USC2510.)
  
- o This established a procedure for law enforcement to obtain judicial authorization to conduct electronic surveillance.

## LEGISLATIVE HISTORY (CONTINUED)

- o Thirty-seven states, the District of Columbia, Puerto Rico, and the Virgin Islands have enacted similar legislation authorizing state and local law enforcement agencies to conduct court authorized intercepts.
  
- o Foreign Intelligence Surveillance Act (FISA) 50USC1801, passed by the Congress in 1978.

**TITLE III INTERCEPTIONS<sup>1</sup>**

Year	Original Interception Applications Authorized			Reported Results	
	State	Federal	Total	Arrests	Convictions <sup>2</sup>
1982	448	130	578	2,870	1,886
1983	440	208	648	2,890	2,007
1984	512	289	801	3,719	2,428
1985	541	243	784	4,159	2,615
1986	504	250	754	3,828	2,444
1987	437	236	673	3,187	1,947
1988	445	293	738	3,812	2,338
1989	453	310	763	6,068	2,019
1990	548	324	872	2,954	970
1991	500	356	856	2,364	605
<b>To- tal</b>	<b>4,828</b>	<b>2,639</b>	<b>7,467</b>	<b>35,851</b>	<b>19,259</b>

## BENEFITS OF ELECTRONIC SURVEILLANCE

- o To illustrate the impact of this extremely important investigative technique, during the period of 1985 to 1991, court authorized intercepts conducted only by the FBI for criminal investigation only led to:
  - o 7,324 individuals convicted;
  - o \$295,851,162 in fines being levied;
  - o \$756,363,288 in court ordered recoveries, restitutions and forfeitures; and
  - o \$1,862,414,937 in prevented potential economic loss.



# THE THREAT TO LAW ENFORCEMENT DIGITAL TELEPHONY

- o Emerging technologies and intelligent networks are being developed and implemented throughout the telecommunications industry without apparent consideration to the legitimate needs of law enforcement.
  
- o Without mandated assistance of electronic communications services providers, law enforcement cannot be assured access to the communications identified in the court order.

## THE THREAT TO LAW ENFORCEMENT DIGITAL TELEPHONY (CONTINUED)

- o Information obtained from these intercepts has:
  - (a) helped to prevent the death or physical injury of innocent victims,
  - (b) thwarted violent criminal activity, and
  - (c) provided extremely credible, persuasive evidence in prosecution of these cases.

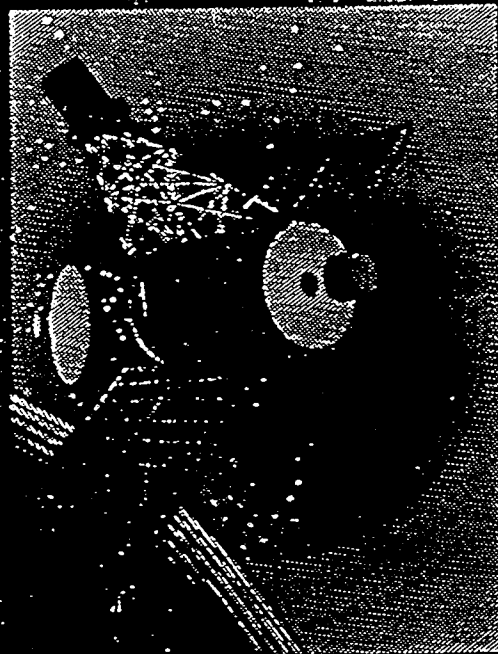
~~SECRET~~

**I. THE CURRENT ANALOG ENVIRONMENT.**

**II. THE NEW TELECOMMUNICATIONS TECHNOLOGIES**

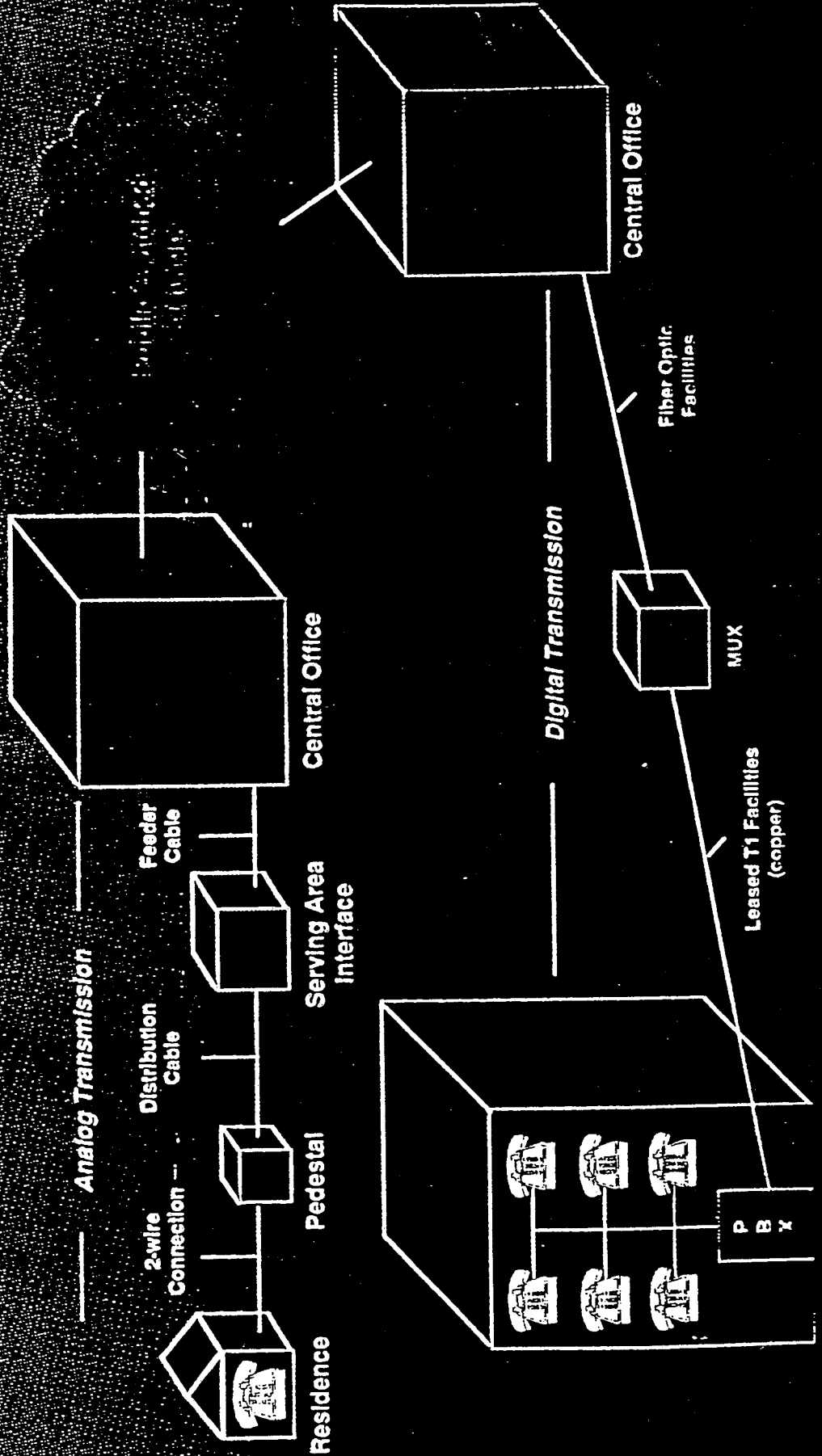
- \* ARE NOT EXPERIMENTAL;**
- \* ARE BEING DEPLOYED COMMERCIALY;**

b7E

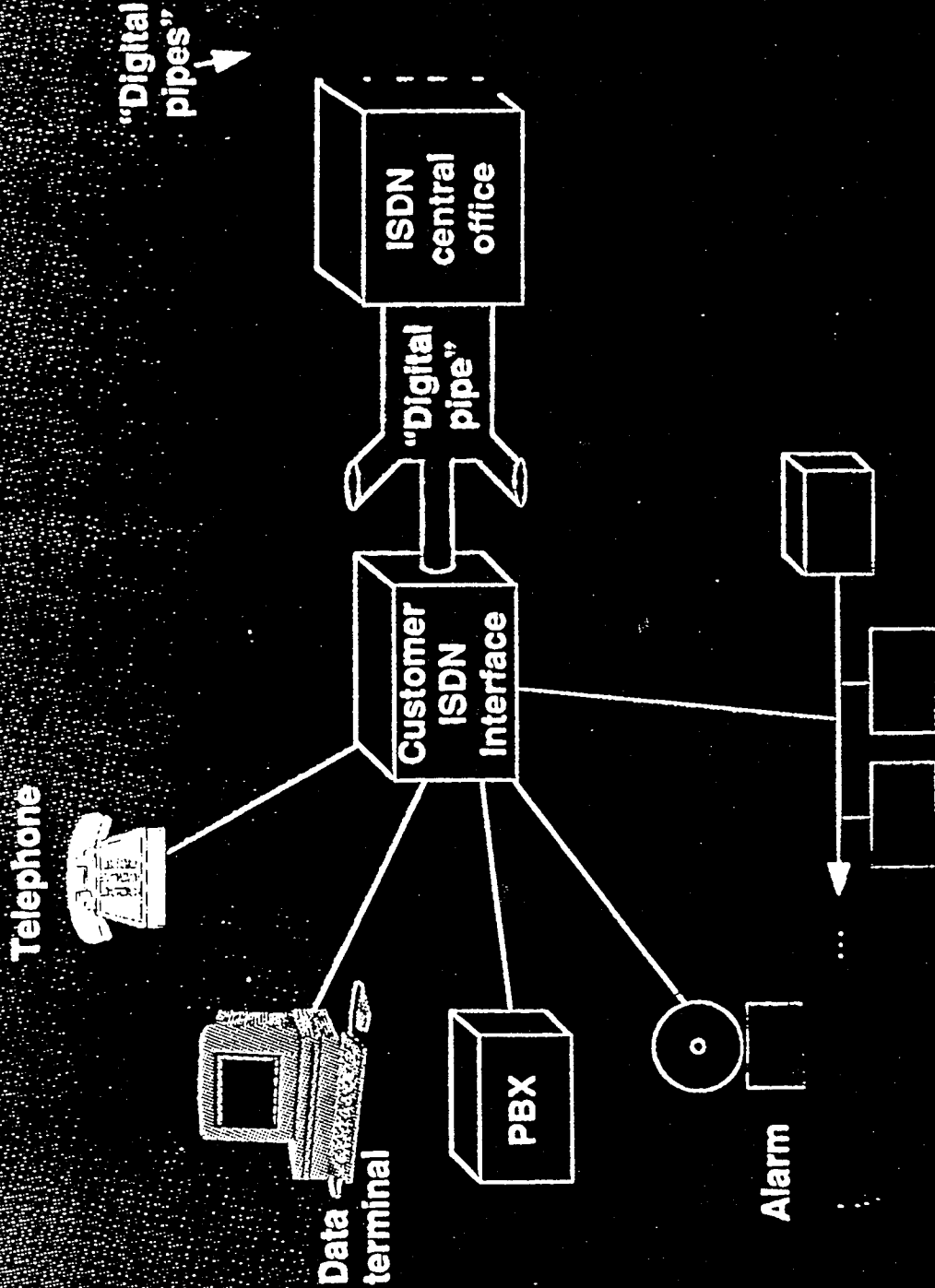
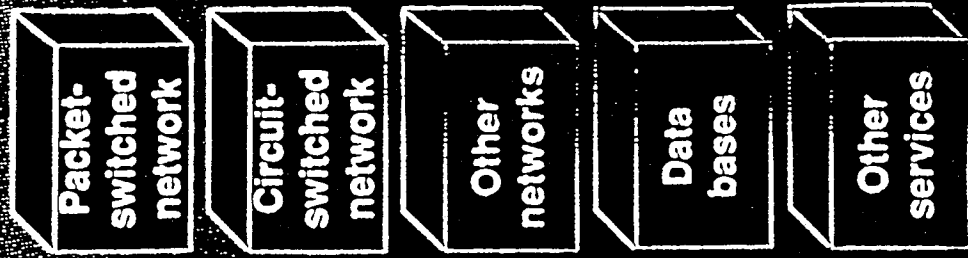


# Today's Operational Environment

Public  
 Advt.  
 Network

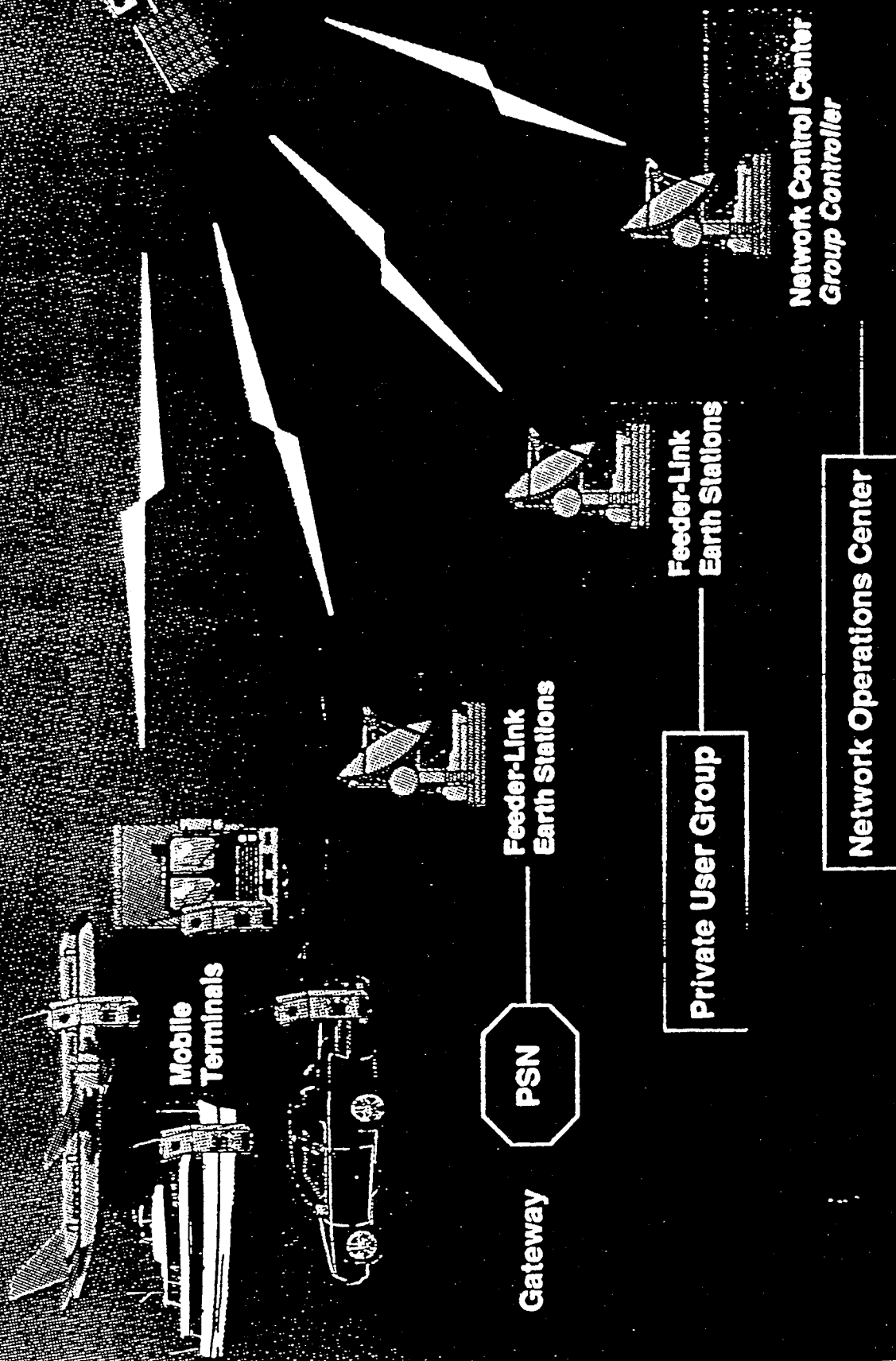


# Integrated Services Digital Network (ISDN)




Local area networks (LANs)

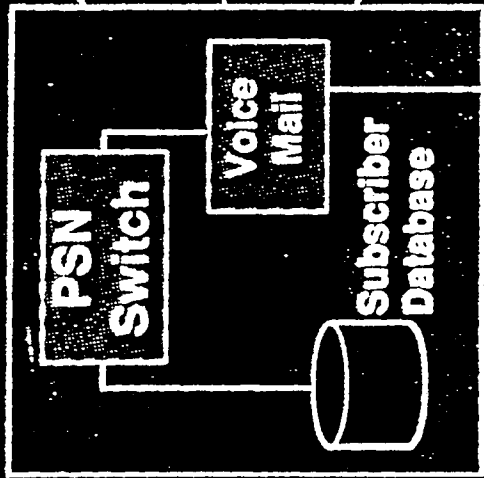
# Mobile Satellite Services




# Personal Communications Services (PCS)

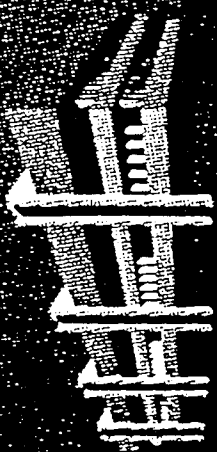

**Callers Dial Your PCS Number and the System Forwards Their Calls to You at Several Locations Simultaneously**

**PUBLIC NETWORK**

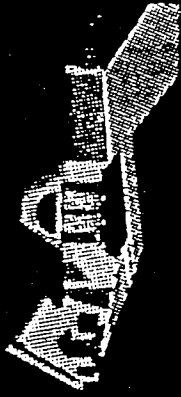


**When No Answer, PCS Transfers to Voice Mail**


**Change the Direction of Your Calls From Any Touch-Tone Phone**



**...To Where You Work**



**...To Your Home**



**...To Your Mobile Phone**