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January 13, 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W. Room 222  
Washington, D.C. 20554

Ex Parte

Re: PR Docket No. 92-235

DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

Pursuant to Section 1.1206(a)(2) of the Commission's Rules, this is to notify you that representatives of UTC (formerly known as the Utilities Telecommunications Council) and Advanced Meter Reading Technologies (AMRT) met yesterday afternoon with the staff of the Wireless Telecommunications Bureau to discuss certain issues in PR Docket No. 92-235 on the "refarming" of the private land mobile radio bands below 512 MHz. Attending the meeting on behalf of UTC were George Dieter, of Baltimore Gas & Electric, and Jeffrey Sheldon, General Counsel of UTC. Michael Reynolds and Ross Malme attended on behalf of AMRT.

In its presentation, UTC suggested certain modifications to the proposed rules on low power telemetry operations in the 450-470 MHz band in order to provide alternative licensing possibilities for utility distribution automation/demand side management systems (DA/DSM), such as utility load control and meter reading. UTC and AMRT described utility use of these systems and their anticipated growth. A copy of AMRT's written presentation is attached to this letter.

UTC pointed out that in the FCC's Notice of Proposed Rule Making in this docket, FCC 92-469, released November 6, 1992, rules were proposed for the licensing of low power telemetry devices. (See, for example, proposed Sections 88.905 and 88.1299). UTC suggested that certain changes could be incorporated in Section 88.905, et seq. in order to better accommodate the types of telemetry systems to be deployed by utilities; i.e., permit licensing of telemetry systems on a primary basis on 10 channels (25 kHz per channel) in the 450-470 MHz band; and permit use of devices

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with relaxed technical standards to the extent output power does not exceed 120 milliwatts (see, e.g., current Section 90.217).

Channels designated for such use could also be licensed for use in itinerant utility mutual aid/disaster recovery systems. At present, no channels are specifically designated in the Power Radio Service for use by crews from one utility who are called upon to assist with restoring service in another utility's service area following storms, earthquakes or other catastrophic events. (Similar provisions are currently included in the rules for the Petroleum Radio Service for oil spill containment and cleanup operations; 47 C.F.R. §90.65(c)(6)). The need for utility mutual aid channels was discussed in UTC's Comments and Reply Comments in this docket.

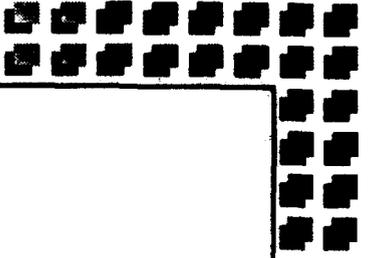
Pursuant to Section 1.1206, two copies of this notice are filed for inclusion in the docket. Please let me know if there are any questions concerning this transmittal.

Very truly yours,



Jeffrey L. Sheldon  
General Counsel

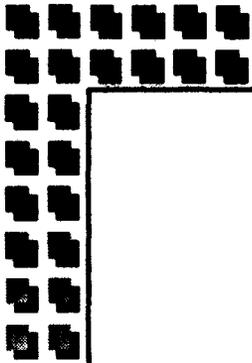
cc (w/o enc.):  
Kathryn Hosford, FCC  
Herb Zeiler, FCC  
Ira Keltz, FCC  
Mark Rubin, FCC



# Paradigms

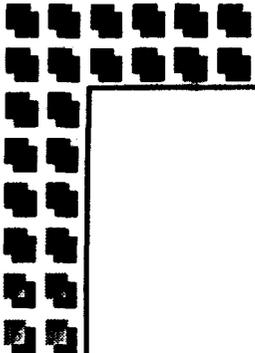
- Patterns of Behavior
- Influence Change



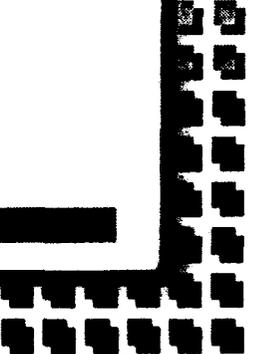


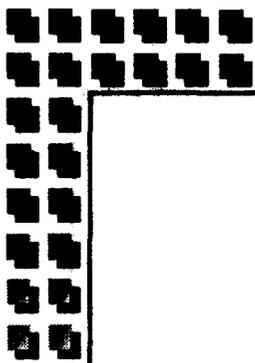
# **AMR Paradigms of the 1980's**

- **Monopoly of Utilities**
  - **Limited Growth Opportunities**
  - **Focus on Inaccessible Meter Reading**
  - **Lowest Cost Solution for Customer**
- 
- 



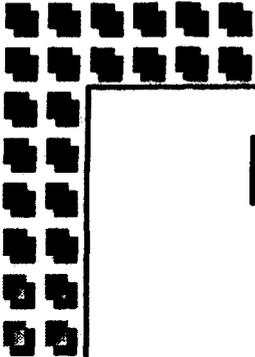
# Utility Industry & AMR Driving Forces

- **Deregulation**
  - **Competition**
  - **Need for Information**
  - **Two-Way Communication**
  - **Flexibility**
- 
- 



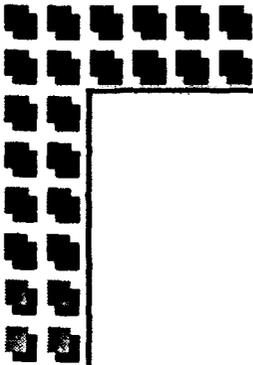
# **Advantages of Mobile Radio for AMR**

- **Ease of Installation**
- **Low Cost**
- **Effective for Monthly Reading**
- **Preferred Technology of 1980's**



# **Disadvantages of Mobile Radio for AMR**

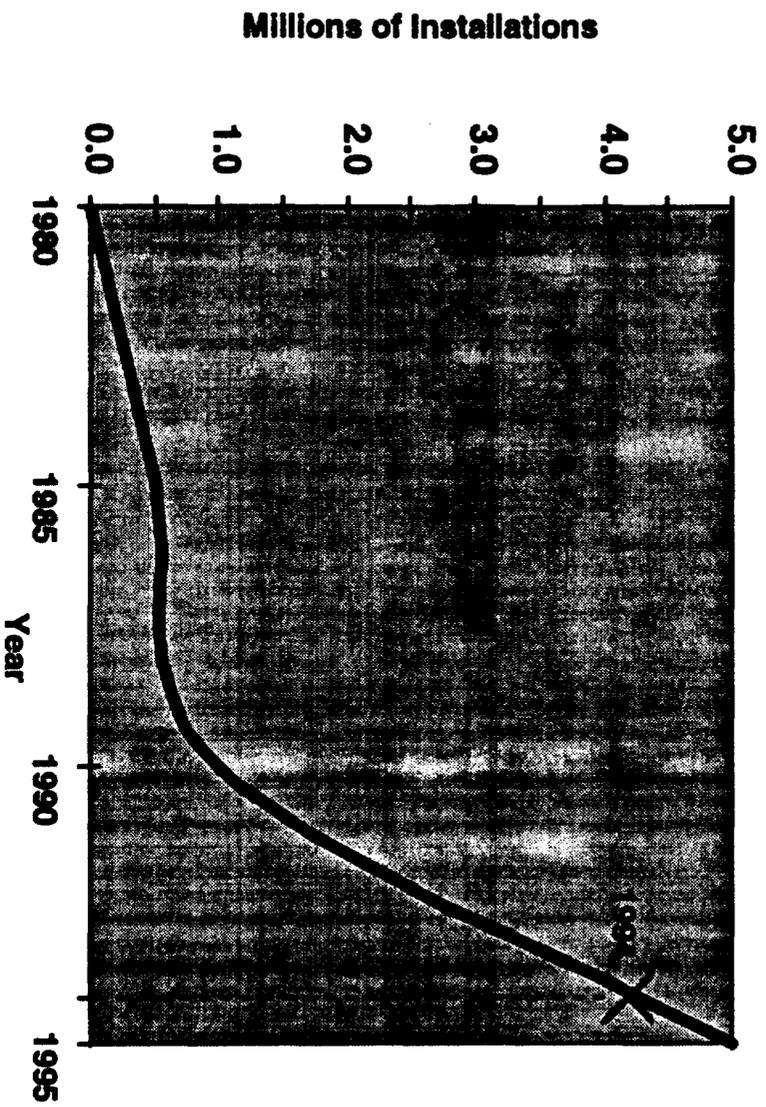
- **Unlicensed**
- **Limited Range**
- **One-Way Data Communication**
- **Lack of Flexibility**

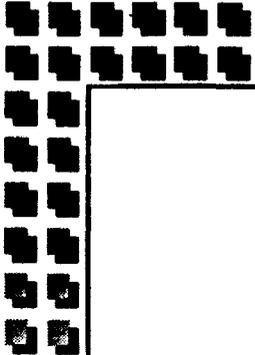


# Utility Benefits

- **Provides Solutions for Today's Needs**
- **Addresses Long-Term Requirements**
- **Modular Approach**
- **Cost Effective**
- **Backed by Industry Leaders**

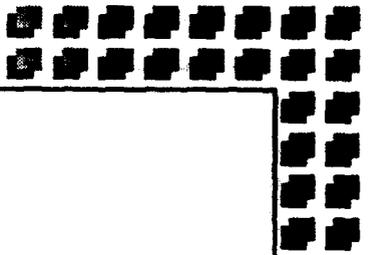
# AMR Installed Base North America





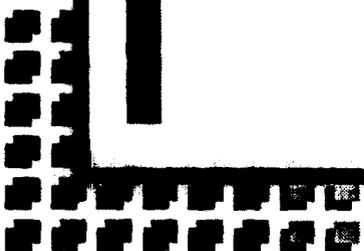
# **AMR Prevailing Communication Alternatives**

- **Telephone**
- **Cable TV**
- **Power Line Carriers**
- **Low Power Radio**



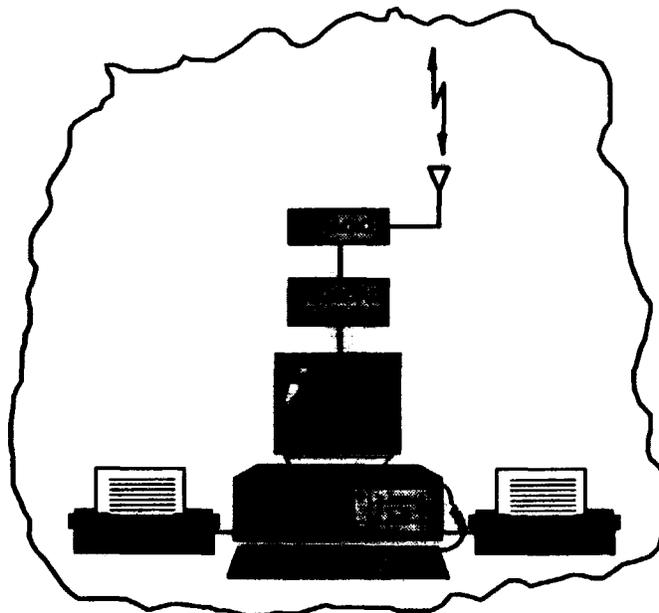
**MARS**<sup>TM</sup>

*“Leading Meter Communications”*

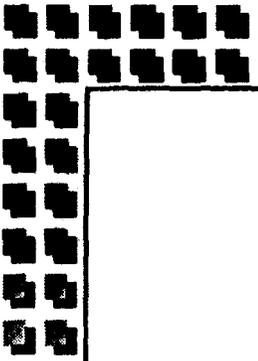


# Utility Situation Analysis - North America

- Utilities have Existing Voice Networks (VHF, UHF, 800, 900 MHz).
- Motorola has 65% Market Share in the Utility Voice/ Data Systems.
- Technology Today Affords Data Transmission Via Existing Network.

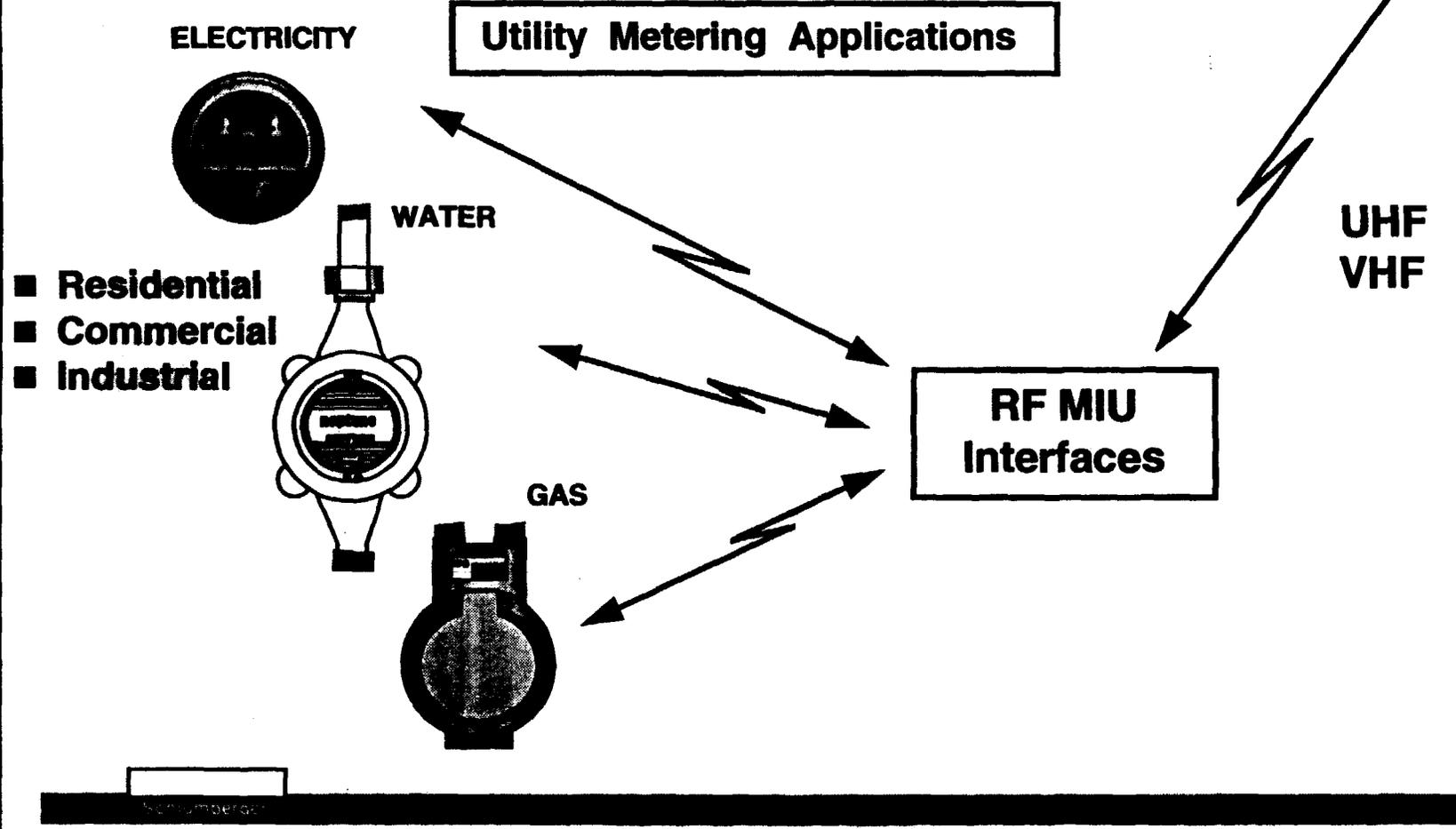


- VHF / UHF
- 800 MHz
- 900 MHz
- Telephone
- Fiber Optics
- Satellite



**MAPS**

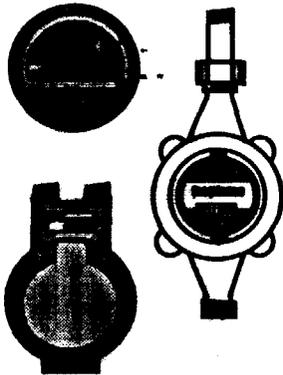
# AMR System Using Existing Network



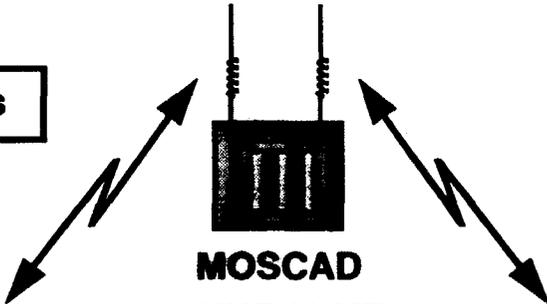
# MAPS

## AMR System Using Existing Network

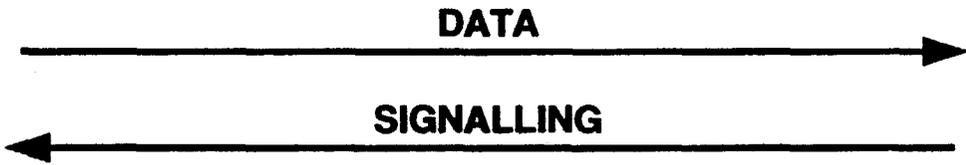
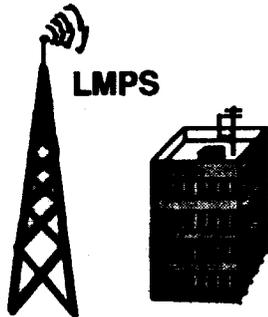
Utility Metering Applications



RF MIU Interfaces

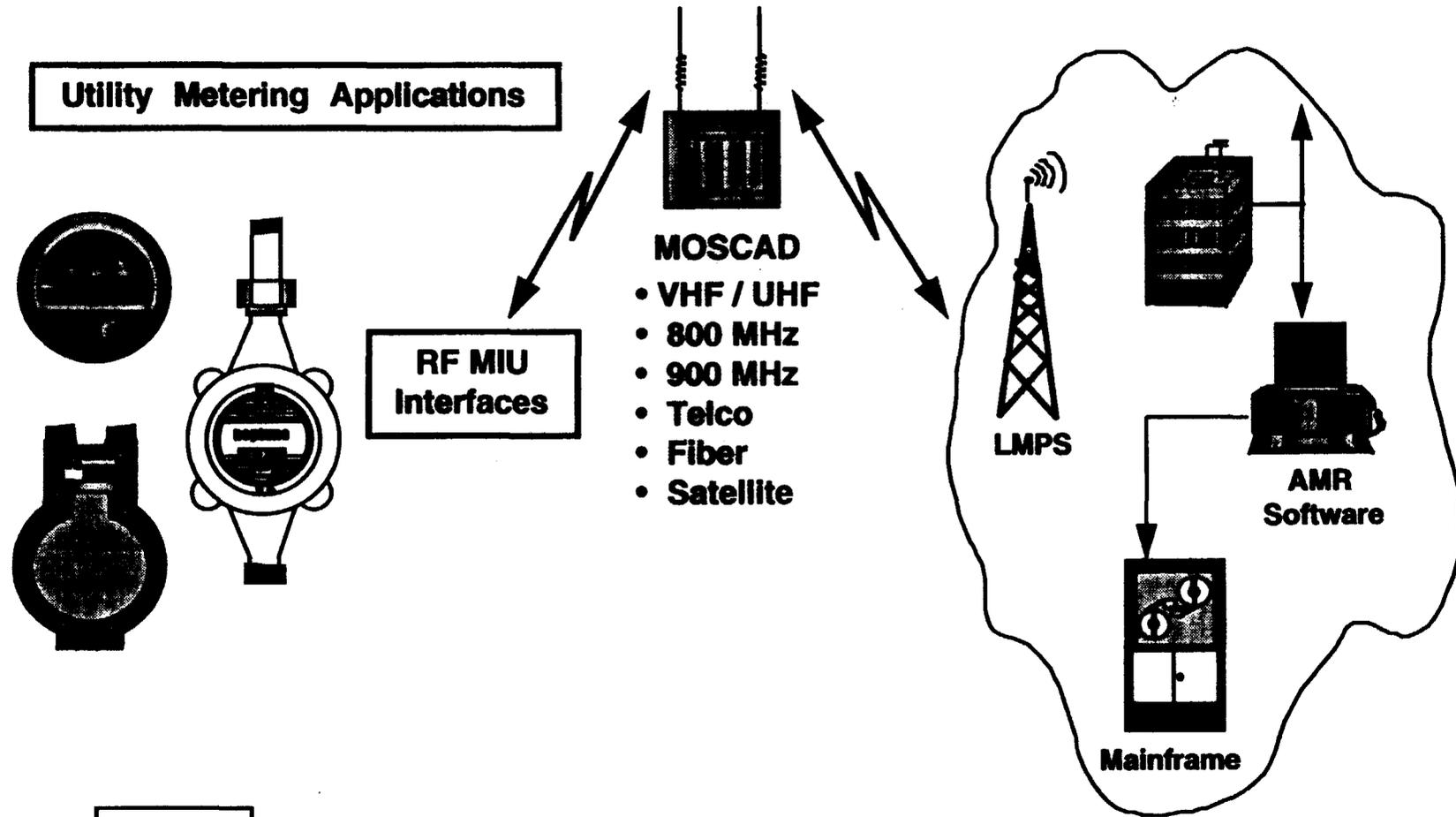


- MOSCAD**
- VHF / UHF
  - 800 MHz
  - 900 MHz
  - Telco
  - Fiber
  - Satellite



# MAPS

## AMR System Using Existing Network



Utility Metering Applications

RF MIU Interfaces

MOSCAD

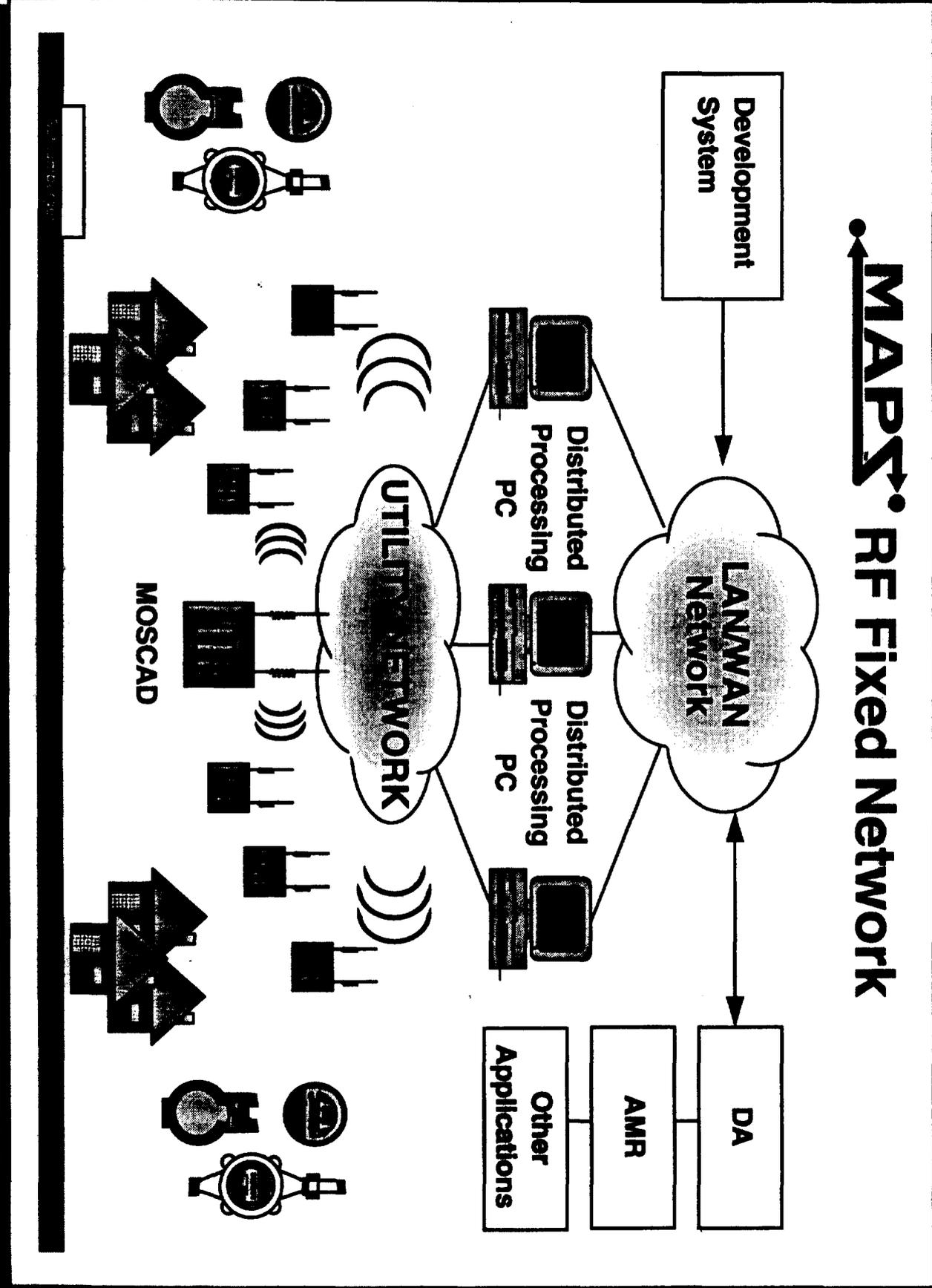
- VHF / UHF
- 800 MHz
- 900 MHz
- Telco
- Fiber
- Satellite

LMPs

AMR Software

Mainframe

# MAPS<sup>®</sup> RF Fixed Network



# MOSCAD Remote Terminal Unit

## Options

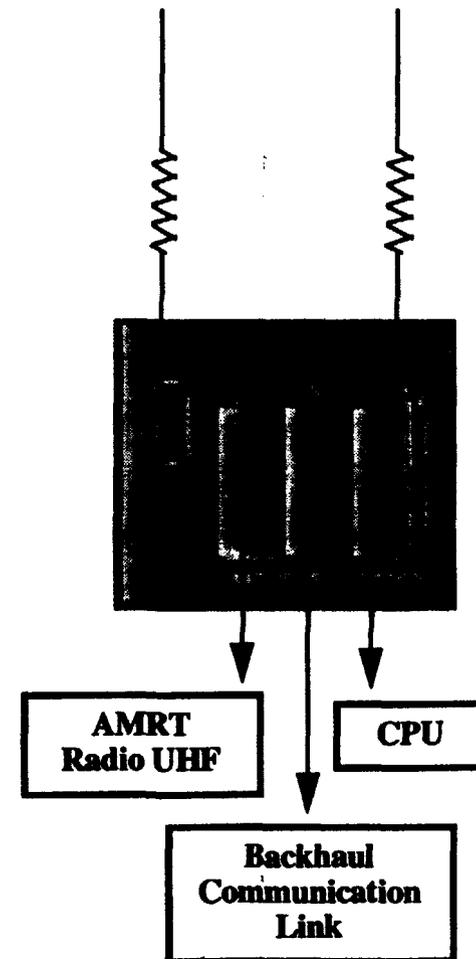
800 MHz  
900 MHz  
VHF  
UHF  
Fiber Optic  
Telephone  
Other

## Features

Multi-tasking  
Programmable Over Air  
Powerful / Flexible  
Uses Existing Infrastructure

## Applications

AMR  
Distribution Automation  
Load Control



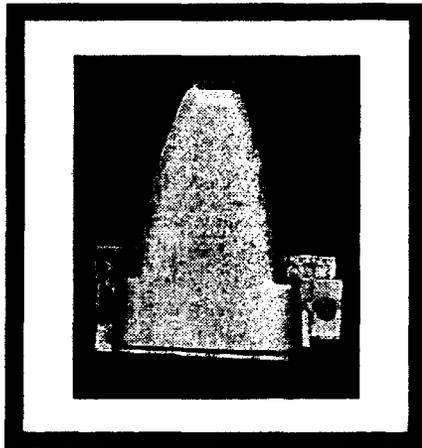
# MAPS<sup>TM</sup> RF Meter Interface Unit



- 2-Way Data Communications
- Individually Addressable
- Available for Water, Gas & Electricity Metering
- Residential, Commercial, & Industrial
- 110 Milliwatts Power Output Maximum
- 450 - 470 MegaHertz Licensed Frequency
- Migrateable from Handheld to Fixed Network

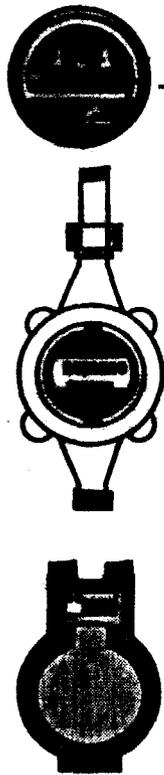
Stamper

# MAPS<sup>TM</sup> RF Meter Interface Unit



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# MAPS<sup>TM</sup> RF MIU CAPABILITIES



RF MIU  
Interface

RF MIU  
Interface

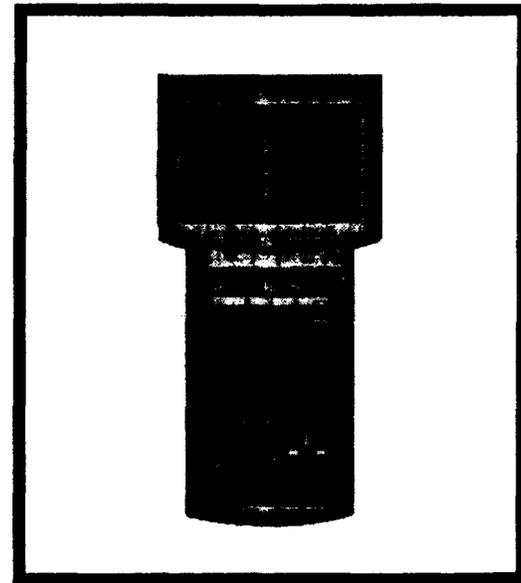
RF MIU  
Interface

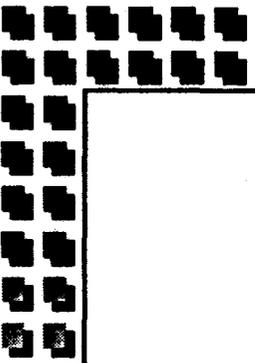
- Two Way
- Electric, Water, Gas
  - Residential
  - Commercial/Industrial
- Increased Range
- Real Time Information
- Complex Rates
- Tamper Detection
- Outage Detection

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# RF Hand Held Strategy

- RF Interface to Radix (Jumbo) 8/94
- RF Interface to Schlumberger (Advance) 12/94
- RF License Available to Other Handheld Suppliers 1/95





## Schlumberger/Motorola MAPS<sub>TM</sub> Base System AMR Features

- 2-Way Communications, Individually Addressable
- Available for Water, Gas & Electricity Metering
- Residential, Commercial & Industrial
- 450-470 MegaHertz Licensed Frequency, 110 mW Power Output Maximum
- Open Systems Architecture, 7-layer OSI and UCA Compliant
- Migrateable from Handheld to Fixed Networks
- **MOTOROLA** Fixed Network Infrastructure Reuse
- AMR and Distribution Automation
- Supported by Schlumberger & Motorola