

# Authorization Policy Negotiation in the SS Basic Capability Negotiation Procedure

Document Number:

IEEE C802.16e-03/62

Date Submitted:

2003-11-12

Source:

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Venue:

802.16e Session #28

Base Document:

IEEE C802.16e-03/62) and URL <[http://ieee802.org/16/C80216e-03\\_62.pdf](http://ieee802.org/16/C80216e-03_62.pdf)>

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The document is submitted for review by Handoff/Sleep Mode Ad Hoc Group and/or by 802.16 Working Group Members

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IEEE C802.16e-03/62.

2003. 11

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# Introduction

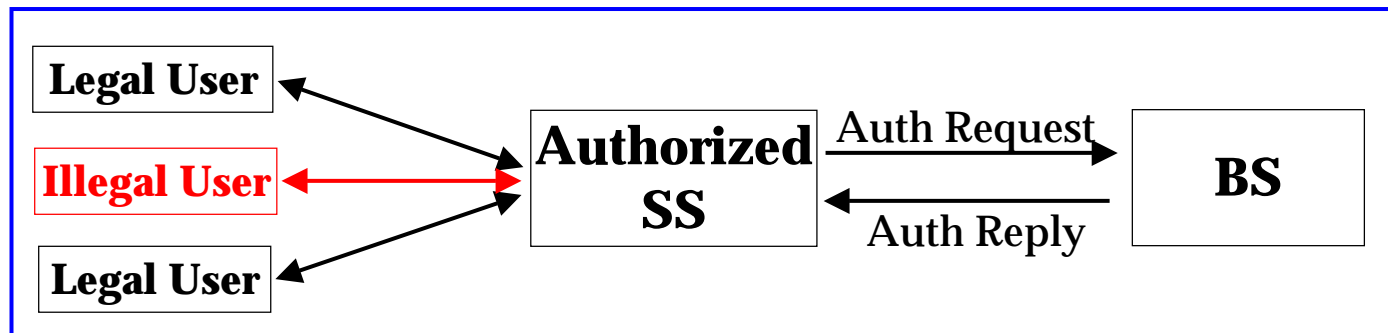
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- **Backgrounds in the privacy sub-layer**
  - **Purpose**
    - **To authenticate SS**
  - **MAC message**
    - **PKM-REQ**
      - **Authenticate Information / Authorization Request**
    - **PKM-RSP**
      - **Authorization Reply / Authorization Reject**
  - **Restriction**
    - **User authentication**
    - **Valid only for the IEEE 802.16 network**

# Problems and Requirements (I)

## □ User authentication

- Current IEEE 802.16 : Device (SS) authentication
- Problem
  - Impossible to authenticate users belonging to authorized SS
- Example



- BS cannot distinguish between legal user and illegal user
- Requirement
  - To support user authentication

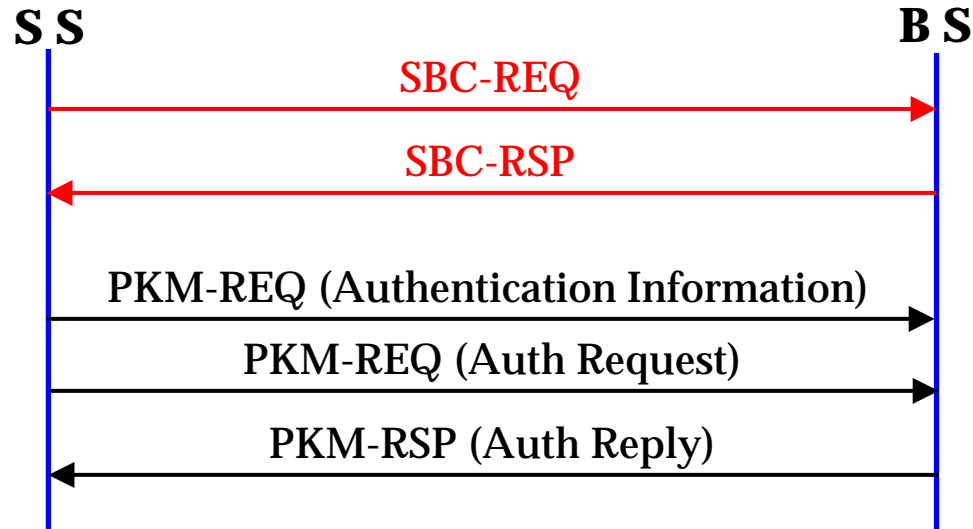
# Problems and Requirements (II)

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- ❑ **Valid only for the IEEE 802.16 network**
  - **To support any kind of authorization mode**
    - **Authentication Type**
      - **Device authentication**
      - **User authentication**
  
    - **Network Model Type**
      - **Fixed network (Current IEEE 802.16 network)**
      - **Mobile network**
        - » **Unique network (Current IEEE 802.16e)**
        - » **Heterogeneous network**
      - **Mesh network**

# Contributions in the 802.16 (I)

## □ SS Basic Capabilities Negotiation Procedure



### ○ Addition Facts

- Authorization Policy Support

### ○ Features

- Authorization policy mode negotiation

# Contributions in the 802.16 (II)

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## □ Addition Particulars

### ○ Insertion at the 6.4.2.3.23 as follows

6.4.2.3.23 SS Basic Capability Request (SBC-REQ) message

*[Insert at the end of 6.4.2.3.23]*

**Authorization Policy Support (see 11.4.2.11)**

### ○ Insertion at the 6.4.2.3.24 as follows

6.4.2.3.24 SS Basic Capability Request (SBC-RSP) message

*[Insert at the end of 6.4.2.3.24]*

**Authorization Policy Support (see 11.4.2.11)**



# Contributions in the 802.16 (III)

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## □ Addition Particulars

- Addition to the Table 306 as follows

11.4.2 SS Capabilities encoding

*[Add to the Table 306]*

**Table 306-SS Capability encodings**

Type	Parameters
5.25	Authorization Policy Support

# Contributions in the 802.16 (IV)

## □ Addition Particulars

### ○ Addition at the 11.4.2.11 as follows

#### 11.4.2.11 Authorization Policy Support

*[Add this section]*

This field indicates authorization policy that both SS and BS need to negotiate and synchronize. A bit value of 0 indicates “not supported” while 1 indicates “supported.” If this field is omitted, then both SS and BS shall use the IEEE 802.16 essential privacy method as the authorization policy.

Type	Length	Value	Scope
5.25	1	Bit# 0: IEEE 802.16 essential privacy Bit# 1-7: Reserved for open privacy. Set to 0	SBC-REQ (see 6.4.2.3.23) SBC-RSP (see 6.4.2.3.24)

# Conclusions

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## ❑ Supplement particulars

- User authentication
- Authorization procedure for heterogeneous networks and mesh networks

**∴ The IEEE 802.16 may need to support new authorization mechanisms**

## ❑ Authorization Policy Support

- SBC-REQ and SBC-RSP message
- Value
  - Bit# 0 : IEEE 802.16 essential privacy
  - Bit# 1-7 : Reserved for open privacy
    - Example
      - » Bit# 1 : EAP Framework Privacy