IEEE P802 Link Security Executive Committee Study Group

March Meeting Summary

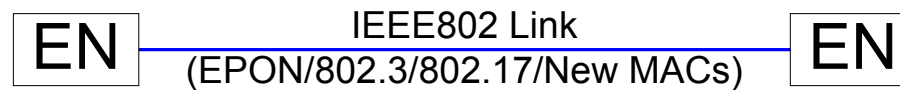Dallas, March 10-12, 2003

Business Scenarios

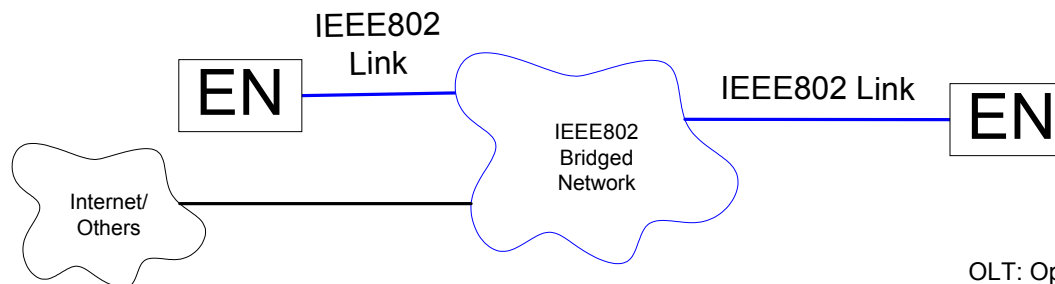## B1) EPON link scenario - Required (imminent need)

```
            EPON
OLT ─────────────────── ONU
```

B2) Extension to other IEEE802 links/MACs - Required

```
              IEEE802 Link
EN ─────────────────────────────── EN
      (EPON/802.3/802.17/New MACs)
```

B3) Layer 2 Network - Required

```
         IEEE802
         Link                    IEEE802 Link
EN ──────────────   IEEE802    ──────────────── EN
                    Bridged
   Internet/        Network
   Others ─────────
```

OLT: Optical Line Terminal (CO side)
ONU: Optical Network Unit (Client side)
EN: End Network Point
In blue: Scope of secure communication

Objectives

Select and/or specify:

- **A unified security architecture (high priority)**

- **A bridge-transparent secure data exchange mechanism (high priority)**

- **An authentication protocol (high priority)**

- **A key management protocol (high priority)**

- **A link security mechanism for 802.3 (including ptp, shared media, and PON) networks if additional MAC-specific functionality is needed (high priority)**

- **A discovery protocol (low priority)**

Business Level Requirements

1. **Prevent theft of service**

2. **Separate customers from each other**

3. **Keep billing records**

4. **Maintain consistency between media (unified security across media, ability to securely bridge across media, ability to handoff security associations)**

5. **Specify a complete solution (by either selecting existing standards or defining new specifications)**

Study Group Charter

- **Evaluate link security architecture issues with the objective of identifying the broader scope that can be common to all MAC solutions**

- **Develop PAR(s) and 5 Criteria for a new standard for a security architecture and link security mechanisms that can be applied to IEEE 802 networks, with early emphasis on 802.3 networks**

- **Make a recommendation on the placement of the approved PAR(s) within a new or existing IEEE 802 working groups**

SG Vote: Favor 32   Against 0   Abstain 4

Next Interim Meeting

- **Ottawa, Canada, June 2-6, 2003**

- **Co-located with 802.1, 802.3 10GBASE-CX4 SG, 802.3 10GBASE-T SG**