Ethernet in the First Mile

IEEE 802.3 Ethernet in the First Mile Study Group

IEEE 802.efm

March 2001

Michael Silverton
Fiberhood Networks
Palo Alto, California
Tel +1 650 269 3894
michael@fiberhood.net

fiberhood networks

ETTH – Ethernet To The Home℠

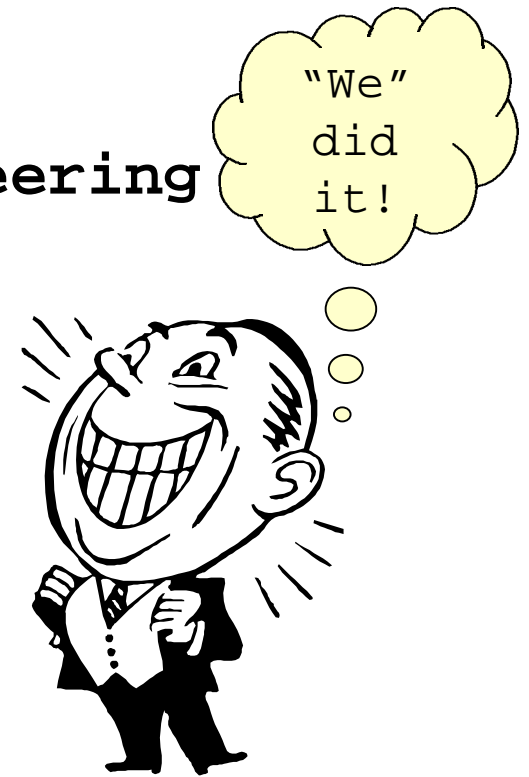# Some Fundamentals of Marketing

1. Better to know where to find PowerPoint "whoosh" sound, than to recite the OSI stack from memory.

2. Thou shalt not use Courier in PowerPoint.

3. If you're not careful, they might assign you to a team that has to <u>do</u> something.

03/03/01

fiberhood networks

ETTH – Ethernet To The Home[sm]

Some Fundamentals of Engineering

"We" did it!

1. Plan it.

2. Build it.

3. Work 24x7 to debug until marketing takes credit for it.

fiberhood networks
ETTH – Ethernet To The Home℠

03/03/01

RII is not "like roads" or "like TV"
… if it's like anything, it's "like phones" …
SYMMETRIC … 'peer-to-peer' for those just catching on.

RII – Residential Information Infrastructure

Fi – ber Op-tic Ca-ble

Cars

Communication ≠ Transportation

RII is NOT:

- "a natural government monopoly"
- "like state TV"
- did I mention **NOT** "like roads?"

RII <u>is</u> like:

Trench Warfare.

Better really
understand **customer**
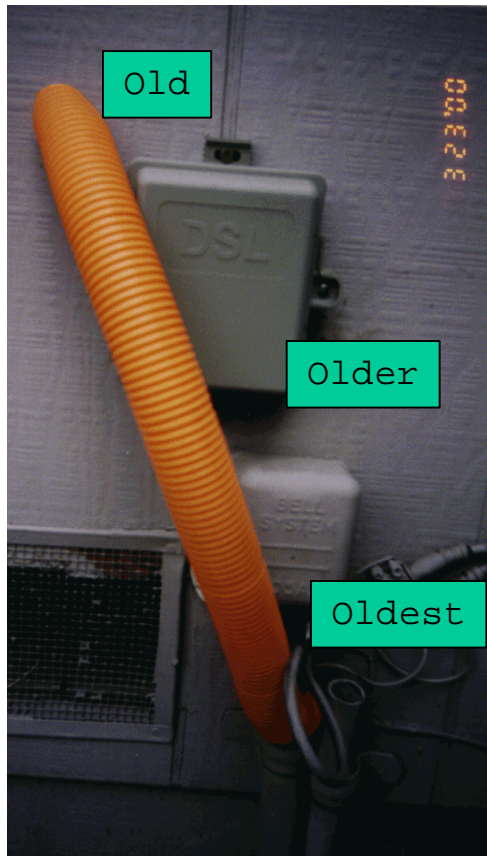**premises** issues.

CAUTION:
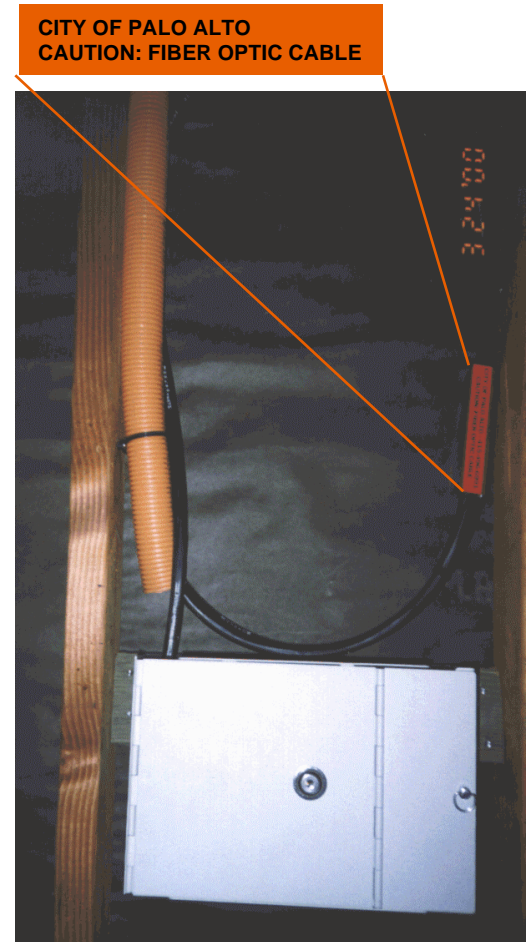GigabitGarage.NET
Crossing
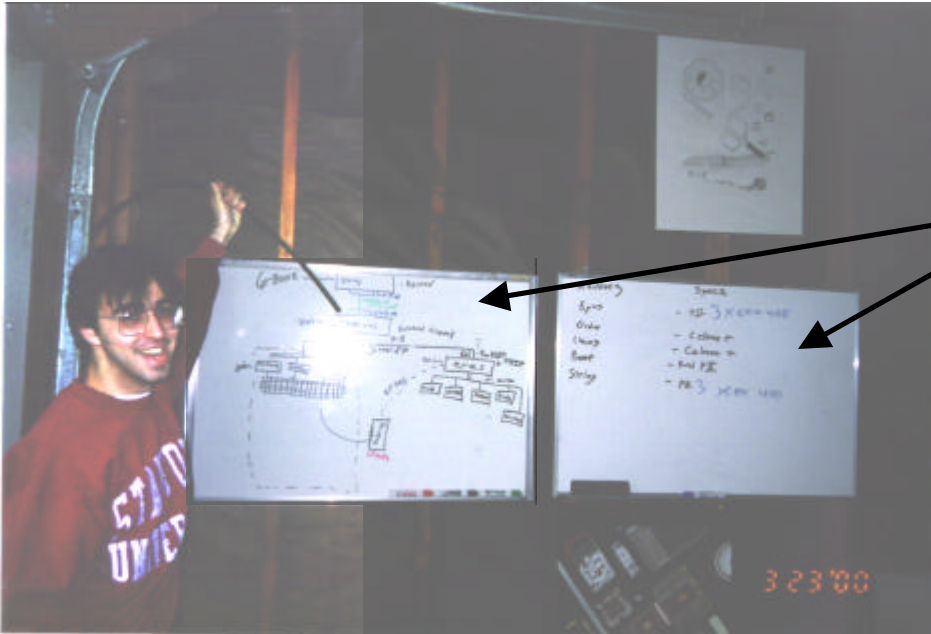
Fiberhood Networks

Better **do better** than local utilities

Beyond Broadband
MPOE?

Old

Older

Oldest

Interior
MPOE

CITY OF PALO ALTO
CAUTION: FIBER OPTIC CABLE

Termination Box
Dual SC to the home.

Provisioning?

Local Internet Exchange (LIX[sm])
- DWDM and Ethernet, period.
- IP Central Office
- IPv6 (TRIAD?)
- Ethernet VoD, Ethernet TV & Radio
- Ethernet video conferencing
- Ethernet refrigerator

ETTH inside

Better **really** understand provisioning and billing issues, but are these the domain of 802.x?

What Howard Asked Us To Do

1) The need for, purpose, and scope of a project for EFM.

2) Justification for the project in terms of its market potential, compatibility with 802 standards, distinct identity, technical feasibility, and economic feasibility.

3) Objectives that the EFM study group should consider for the project.

fiberhood networks

ETTH - Ethernet To The Home[sm]

The need for, purpose, and scope of a project for EFM.

- **Need:**
  Does EFM need to actually build anything?
  Perhaps it could validate existing efforts as
  "EFM Approved" architectures.

- **Purpose:**
  Quick (5-10 yr.) and Merciful (more or less orderly)
  Death for SONET and ATM.

- **Scope:**
  Something along the lines of a 50,000 home
  residential and mixed use development.

fiberhood networks

ETTH – Ethernet To The Home℠

Justification for the project

- **market potential:**
  Potential? It's kinetic.

- **compatibility with 802 standards:**
  IEEE assure integrity of Ethernet "brand."

- **distinct identity:**
  802.x within 900', or even 9' is not "all Ethernet."

- **technical feasibility:**
  100%. It's already working. Expand the base.

- **economic feasibility:**
  Price of leadership has never been cheap.

fiberhood networks
ETTH – Ethernet To The Home[sm]

Objectives that the EFM study group should consider for the project.

- **Protection of "Ethernet" identity in ETTH**
  Ethernet within 900', or even 9',
  is NOT ETTH!!! Define **"IEEE-EFM Approved"**
  architectures.

- **Eschew Obfuscation**
  Do we really need 802.efm? Is anything
  fundamental really missing?

- **Address decommissioning of RJ-11**
  In new housing starts.

- **Promote more widespread use of RJ-45**
  Amongst TV, radio, set-top, and appliance
  vendors, as the universal interface for
  the eventual single pipe network.

fiberhood networks
™
ETTH – Ethernet To The Homesm

ETTH - Ethernet To The Home

- It's expanding in Palo Alto.

- Green fields want it.

- No longer a question of whether, where, or when ETTH.

- Merely a question of where ETTH is building next and how to ensure that standards are enforced and identities preserved.

fiberhood networks

ETTH - Ethernet To The Home℠

IEEE 802.3 Ethernet in the First Mile Study Group

Thank You!

A new kind of neutral, beyond-broadband
Managed Access Network Operator.

fiberhood networks

ETTH – Ethernet To The Home[sm]

03/03/01