# Optical Fiber to the TestBed

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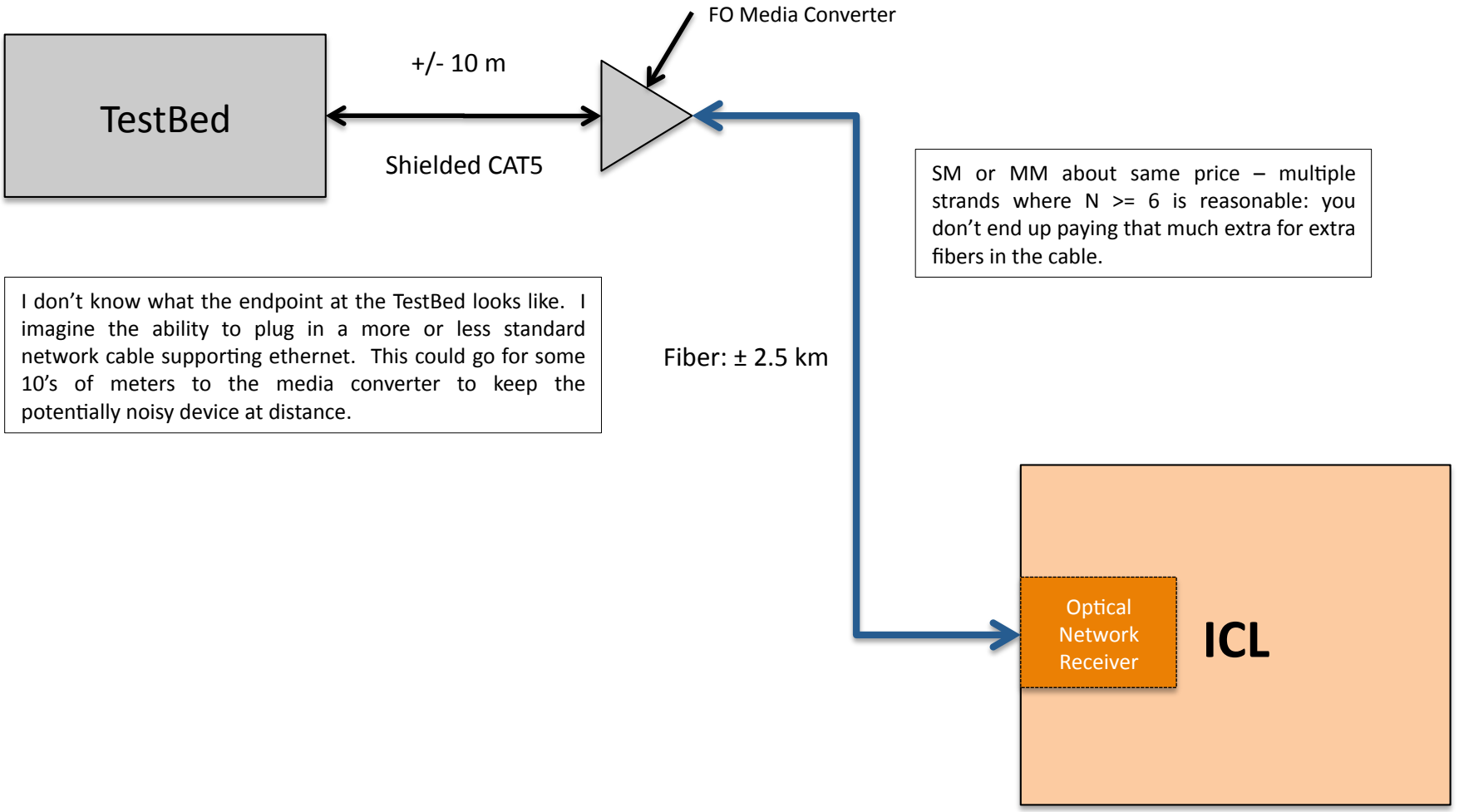
# Why?

- Bandwidth
  - SM optical fiber will have 100x that of DSL solution
  - MM still 10-20x at 2 km.
  - We may not need/want this for the test bed in continuous mode but when I ask people what have been shortcomings of AURA system, ability to transfer data back to analyzer has ranked top among complaints.
  - Could be useful if we want to put other stuff out there: transient detector isolated from TestBed.
- Versatility – can also deliver fast
  - Clocks
  - Synchronization signals

# Why not?

- Cost – fiber is expensive O(10k) for cable + equipment cf O(1k) for DSL equipment
- Extra cables – still need copper for power
- Extra labor associated with integration
- Danger of EMI though I believe that DSL drives lines pretty hard so I'd think there would be less danger of radiating cables or EMI coming off of the line driver.

# How to hack in a fiber



# Planning

- If there is interest I would contribute the fiber and equipment to make this work.