



CRANE DIVISION

NAVAL SURFACE WARFARE CENTER



DISTRIBUTION STATEMENT A: Distribution approved for public release; distribution is unlimited.



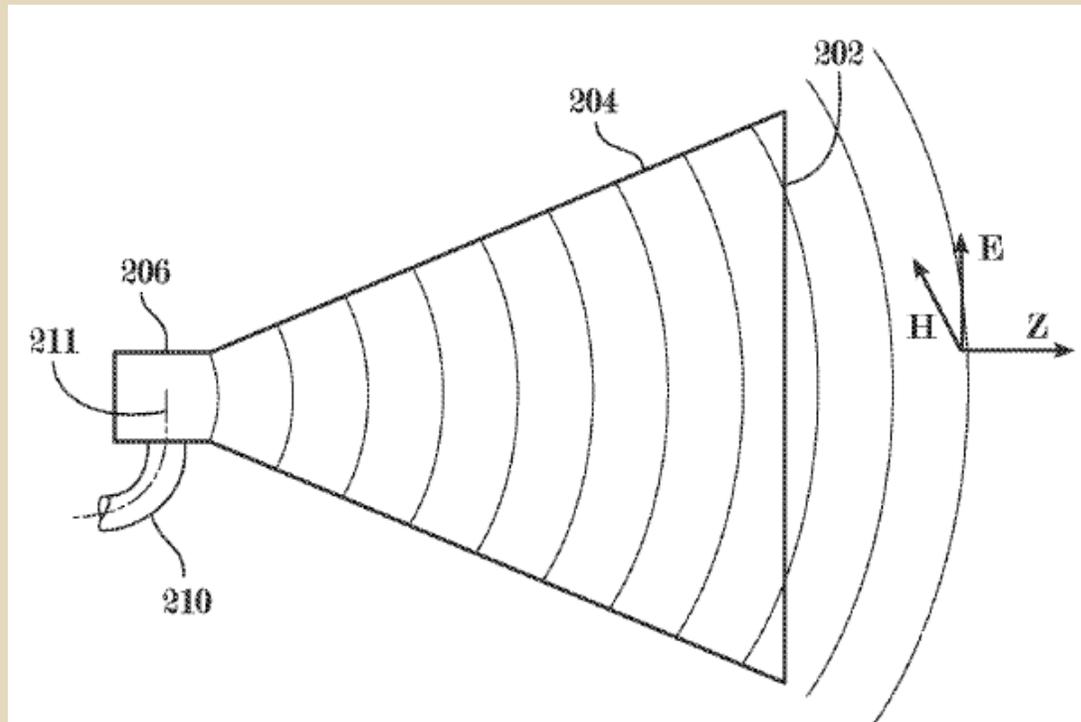
Aperture Antenna with Shaped Dielectric Loading

**Presented by
Jeff Snow**

Patent Application #12/540,114

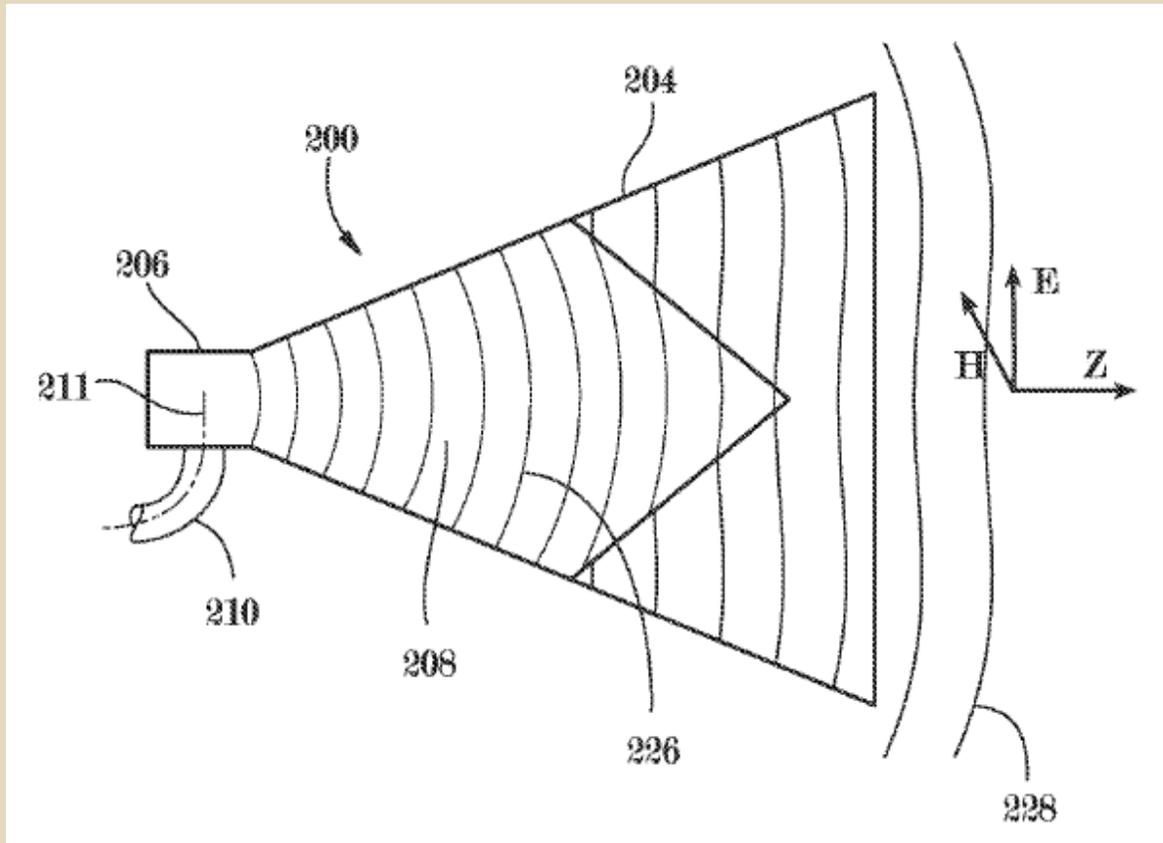
DRAWINGS

- **Horn antenna gain is limited by curved phase front.**



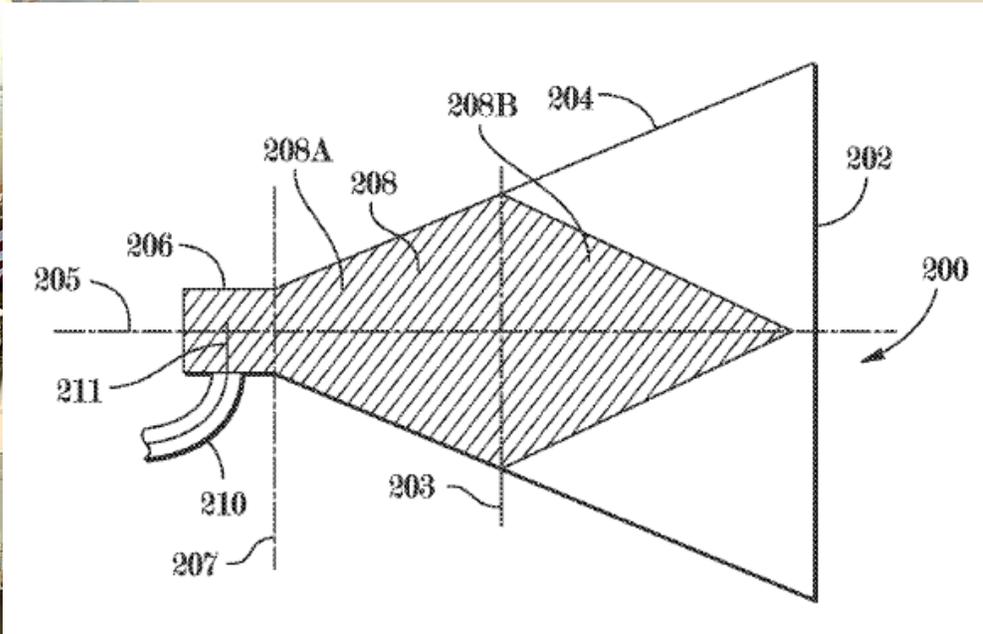
DRAWINGS

Greater gain, lower sidelobes, limited modeling, greater weight due to dielectric

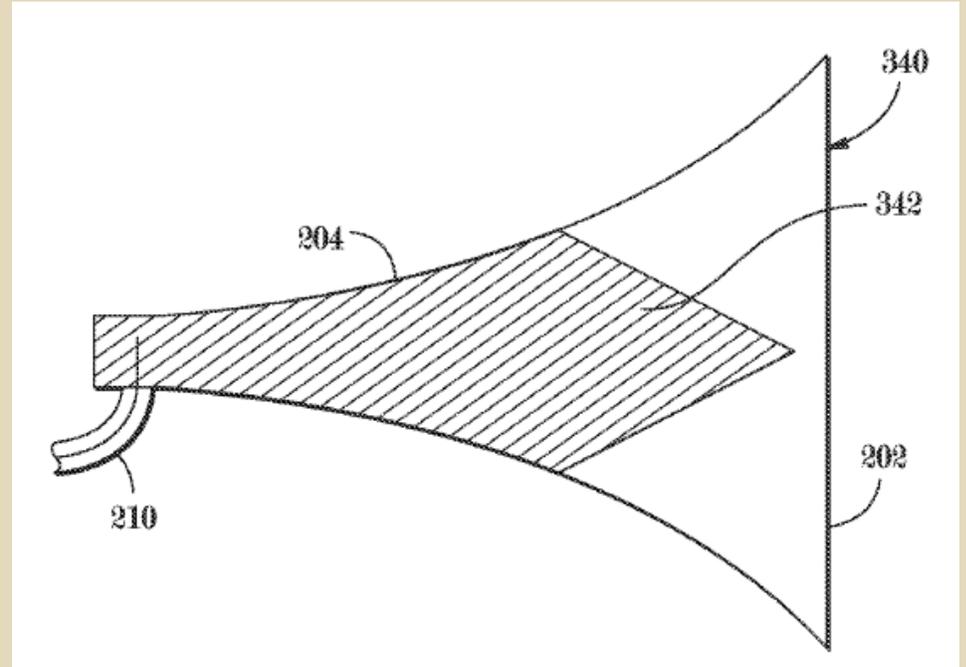


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Drawings

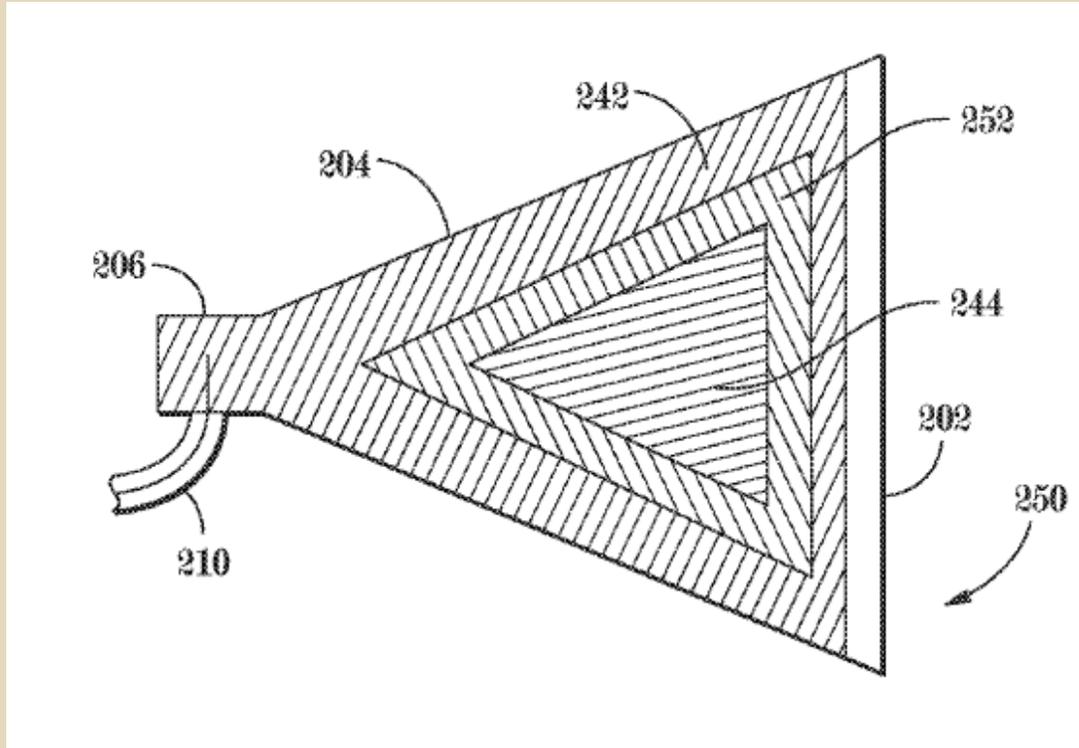


Standard Horn



Flared (wideband) Horn

Drawings



Horn with multiple dielectrics

COMMERCIAL APPLICATIONS

- **Higher gain directional base station to limit, better at higher frequencies, limit free riders (reduces signal strength in non-desired directions)**
- **Directive links**