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Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of:	)	
	)	MB Docket No. **08-172**
Development of Devices Capable of Supporting	)	
Multiple Audio Entertainment Services	)	
	)	

To the Commission:

COMMENTS

Mullaney Engineering, Inc. ("MEI"), hereby submits its comments in response to the Public Notice released by the Commission in MB Docket 08-172, which solicits comments concerning the Notice of Inquiry (NOI) which proposes to require devices capable of receiving Satellite Digital Audio Radio Service (SDARS) to include digital audio radio or HD Radio ("IBOC"), or any other technologies capable of providing audio entertainment services and further require any device capable of receiving DAB should also be capable of receiving SDARS. The decision to issue this NOI was an outgrowth of the unprecedented decision (MO&O 07-57, FCC 08-178) to create a monopoly by permitting the merger of the two sole entities which currently totally control SDARS.

MEI fully supports the concept that the FCC should regulate not only transmission devices but also fully regulate the devices designed for reception of those transmission services. MEI believes that as currently written, **Title I of the Communications Act** gives the FCC broad discretion in all such matters. Unfortunately, the FCC has traditionally

relied upon "market place factors" to resolve issues regarding the operation and performance of receivers. This lack of self leadership has lead to the misconception that the FCC does not have such authority.

A review of the FCC approach to DTV receiver penetration proves that reliance on "market place factors" **does not works when attempting to deploy new technologies**.

> Rather than initially mandate (in 1999) the inclusion of the capability of DTV reception in all televisions receivers sold within the U.S., the FCC predictably decided to **once again rely on** "market place factors". It was not until some 5 years later when it was obvious to everyone, including by now the FCC, that the hope of a **seamless DTV transition was in serious trouble** because receivers capable of DTV reception had not made a significant penetration in to the consumer market place as was anticipated by the FCC. It was only then that the FCC subsequently mandated inclusion of the DTV technology in all reception devices sold within the U.S. Had it issued this mandate in the beginning, many believe that it **would have been unnecessary for Congress** to implement the coupon program which was now needed spur penetration by helping to offset the costs of set-top converter boxes required by Consumers, with analog only TV sets, for DTV reception. But certainly the coupon program would have been **dramatically less costly** to the American taxpayer had the DTV receiver mandate been issued 5 years

earlier. Because of this delay and the last minute decision to have a coupon subsidy program, panic has been expressed by members of Congress and the FCC Commissioners of an impending doomsday scenario.

It does little good for the FCC to create new services, especially when based upon new technologies & new spectrum, **if the FCC fails to create an atmosphere** where such new services have a **realistic chance** to fulfill there statutory mandates. When the FCC initially created the Cellular Telephone System, it mandated **nationwide compatibility** between the two providers in each area of the country. This truly fostered competition and provided assurance to the public that if any cellular provider was serving the area, the public was guaranteed the ability to make a call (albeit at roaming rates). However, since that time the FCC has seen fit to **eliminate the original mandate of nationwide compatibility** and now the public has less competition and is held hostage by their specific provider or at least **are monetarily discouraged** from changing providers since many cellular phones are not compatible with other competing systems. This is emphasized by the lack of compatibility standards for such mundane ancillary items such as chargers for cell phones which many believe is specifically intended to discourage competition and limit consumer choices by maximizing incompatibilities and thus, maximizing the cost to consumers when making changes. **If America is to have a true global economy then our technology must also be open to those global markets.**

Failure of government to regulate receivers encourages patent holders of new technologies, licensees, equipment manufacturers and consumer manufacturers (especially car manufacturers) to **artificially manipulate the market place** by entering into exclusive predatory deals which ultimately harm competition and thwarts the public interest by limiting consumer choices and by stifling innovative technological developments.

In the case at hand, the **main difference between** a Satellite system and the traditional Broadcast system (AM, FM, IBOC, FM-SCA, & DTV) is Satellite is a **subscription** service and Broadcasting is a **Free over the air** service. But unlike Satellite systems, Broadcasters are required to provide considerable public service requirements (lowest unit rate for political ads and required endorsement acknowledgment when a product or viewpoint being presented is being paid for by another interested party - - to name just two). This Free Broadcast system is in **danger of collapse**, if technological barriers are permitted to be erected which **artificially hampers** their ability to compete. The digital revolution is definitely coming and **Broadcasters must be given the tools to adequately compete**. The recent creation of a nationwide monopoly in the Satellite Radio service will not foster competition and maximize choices for the American consumer **without first having a level playing field**.

The FCC must adopt rules which provide the general public with the **widest array of choices** when it comes to "how and where" they obtain their news & entertainment from. If Congress did not already believe this to be an imperative then there would be no FCC

regulations on the **cross-ownership** between newspapers & broadcasting or between TV & Radio. There would also be no limitation on the number of stations that one entity can own in a given area. It should be understood, **"They that control the information highway ultimately control the views of America"**.

Mandating the ability of consumer Radio & TV reception devices is essential for fostering **diversity and minority viewpoints**. **In MB Docket 07-294, the FCC is investigating ways to Promote Diversification of Ownership in the Broadcast Services**. Given that the majority of minority ownership is currently in AM broadcast stations, to limit the mandate of compatible receivers only for the newest technologies (SDARS & HD Radio) is a **giant step backwards in promoting Diversity**. In addition, as part of that docket, the FCC is reviewing a proposal to **re-allocate TV Channels 5 & 6 to the FM band** and for that newly added spectrum to be broadcast in a digital format. This proposal will permit the **migration of the existing AM band** to a significantly higher quality digital format and this new band will also create new opportunities for **Non-Commercial Educational FM (NCE) and the Low Power FM (LPFM)** services. It is also possible that this new band can be used to rectify some of the **many grandfathered short spacings** that currently exist within the traditional FM band. Should the FCC decide favorably on this or other such spectrum re-farming proposals, its failure to include a receiver mandate for such new and innovative services **will make such adoption ring hollow**. The success and competitiveness of such new innovations is directly dependent on the quick public embrace. **Special interests should not be permitted** to artificially manipulate the market

place to prevent new competition and consumer choices. A new broadcast service which has to wait 7 to 10 years or more for market penetration, is doomed to failure (just look at competitiveness of IBOC).

The mandated receivers should include **minimum performance specifications**. The **FCC and the FAA** have argued for more than 25 years about potential interference from broadcast FM facilities to the frequencies immediately above FM used by the Aviation Industry. Had the FCC & FAA initially elected to **cooperate and adopt** minimum specifications in aviation receivers, the interference problem would be nearly non-existent by now (MEI wishes to state that it believes that the majority of the FAA concerns are based upon flawed mathematics and the requirement to protect a 1950 style aviation receiver). But no, it was simply too much to ask for two Federal Agencies **to put turf wars aside** and decide to cooperate to foster public safety above all else. This is just a magnification of our currently broken political system in which two dominant Political Parties refuse to put aside political, partisan bickering and make **"Country First"**, notwithstanding their oath to do so.

If the decision is for the FCC to mandate receiver compatibility it should look towards some sort of **Software Defined Radio (SDR)** design. This would more easily permit the retrofitting of older receivers when technologies change. While certainly not everything can be anticipated but certainly many items can. Given the current boom in cellular use in automobiles, consideration should be given to mandating a means for hands-

free operation while driving. This could be through a wireless connection such as **Bluetooth or a front-panel** accessible jack (the receiver would optionally automatically mute entertainment audio). The explosion of the **iPod** devices also needs to be considered. Similarly, the need for compatibility with external devices it was abundantly made clear when Satellite providers attempted to use an external **RF Modulator** to obtain reception over a traditional broadcast receivers. The resulting interference to reception of FM radio stations determined that to be a totally unacceptable solution. Receivers (especially in automobiles) should provide a standard means of interface that can be used by external devices. This might also be the perfect time to incorporate a standard by which vehicle drivers can be made aware of **emergency information** (national and local Police/Fire) with or without the radio being in the on position. Such emergency capability could be accomplished with the help of **Wi-Fi and GPS**. It is apparent that other technologies are evolving all of the time, so the standards for receivers should be flexible and easily changed. Given the many mandates that vehicles already must comply with, the FCC should coordinate with other Federal Agencies when necessary when seeking to require such items (Department of Transportation).

MEI believes that the **intrinsic authority** of the FCC to regulate **reception devices** is easily differentiated from the embarrassing defeat in the Federal Court system of the FCC's attempt to mandate the implementation of the so called **"Broadcast Flag"**. That item had nothing to do with the "actual reception" of the transmitted material but was a **blatant attempt by special interests** to have the FCC limit what the American consumer

could **subsequently do** with the "video content" **long after reception had finished**. This NOI is clearly **addressing the ability** of the consumer to have the technical option of receiving both Satellite & Broadcast signals and is not attempting to control what the consumer does with that material after reception. In any event, it is clear that the FCC has the **legal authority to investigate and recommend** changes that further spectrum efficiency, diversity and the public interest.

At a minimum, the FCC should immediately start the investigative process and then, in an abundance of caution, seek Congressional authority to specifically grant the FCC the broader ability it need to insure technological advances are timely made available to all consumers regardless of the receiving device being used.

The technology exists today for a common receiver for all bands. In Europe receivers either currently exist or are in final development which can receive multiple modulation formats: analog AM, Analog FM, IBOC FM, DRM FM & many combinations for shortwave.

In any event, MEI strongly believes that any receiver which is capable of receiving FM IBOC **must also be capable of receiving analog FM & analog AM signals**. The existing AM facilities are finding it hard enough to compete without having their service totally excluded from the next generation radio receivers.

Conclusion: MEI hopes that this NOI is an indication that the FCC has finally recognized its statutory requirement is to **Lead and Direct** the communications industries in this country and not continue to simply follow and react after the fact.

Respectfully submitted,

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10 November 2008 By:

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