
Migration of DOD Satellite Operations from the Space Ground Link Subsystem Frequency Band to the Unified S-Band

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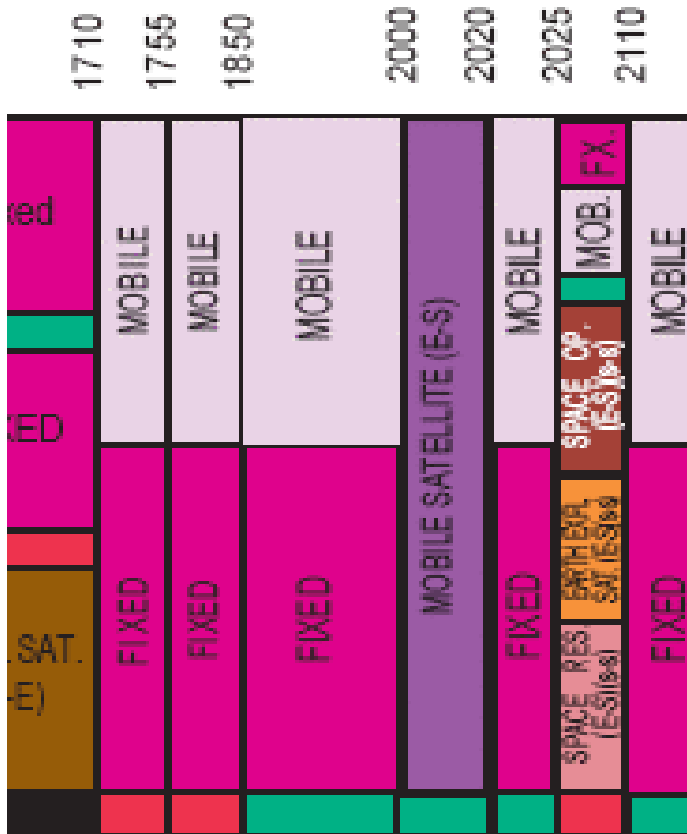
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OVERVIEW



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- **Background**
 - **Dual Band Requirement**
 - **Recommendations**

Background



Frequency Bands in Question

1755-1850 MHZ SGLS

2025-2110 MHZ USB

- DOD has had exclusive use of SGLS since 1960's
 - DOD Satellite Control Networks have invested heavily in the SGLS infrastructure
- Development of 3G wireless technology pressuring for more spectrum
 - Executive Directive October 2000 directed a study to identify spectrum possibilities for future 3G use....SGLS identified
 - Initial direction for DOD to move from the SGLS band

- **Advantages**
 - Compatibility with other government agencies (NASA, NOAA)
 - Future Integrated Satellite Control Network transition made easier
- **Disadvantages**
 - Shared Band
 - NASA, NOAA, TV Newscasters

- DOD will move into USB
 - AFSCN schedule shows initial capability by 2007 with full capability by 2014
- NSSO managing the transition
- Direction for all satellite acquisition programs to be dual band compatible
 - No commercial dual band transponder available
 - Development being pursued by SMC
 - Power, Weight, Cost and Complexity may be an issue for small satellites

- NSSI is drafting an implementation plan and roadmap
 - R&D or experimental Satellites have wording that exempts them from the dual band requirement
 - Small satellites will have to manage to the frequency changeover

Recommendations



- Small satellites have a relatively short build cycle (1 to 3 years)
 - not usually block-buys
- Transition to “Dual Band” is considerably longer than 3 years
 - Both “SGLS” and “USB” available
- Recommend that small DoD satellites be able to leap-frog the transition
 - Waiver requests from “dual-band” requirements
 - Switch to USB when network is ready