

Space Data Corporation

Air-To-Ground Proceeding WT Docket No. 03-103

Gerald Knoblach
Chairman and CEO

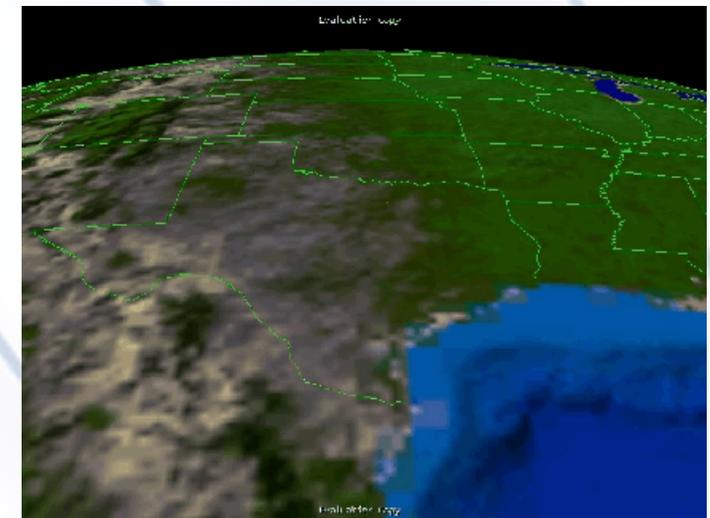
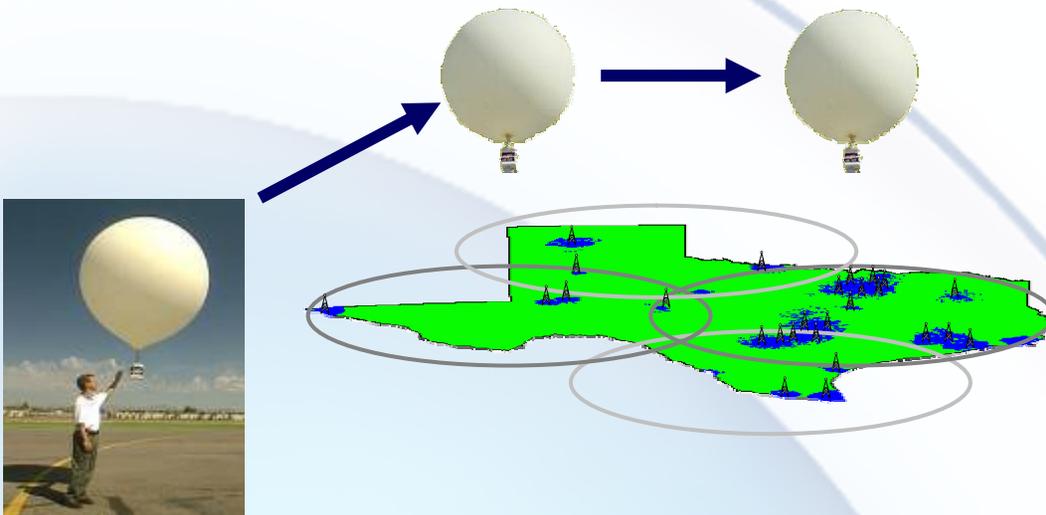
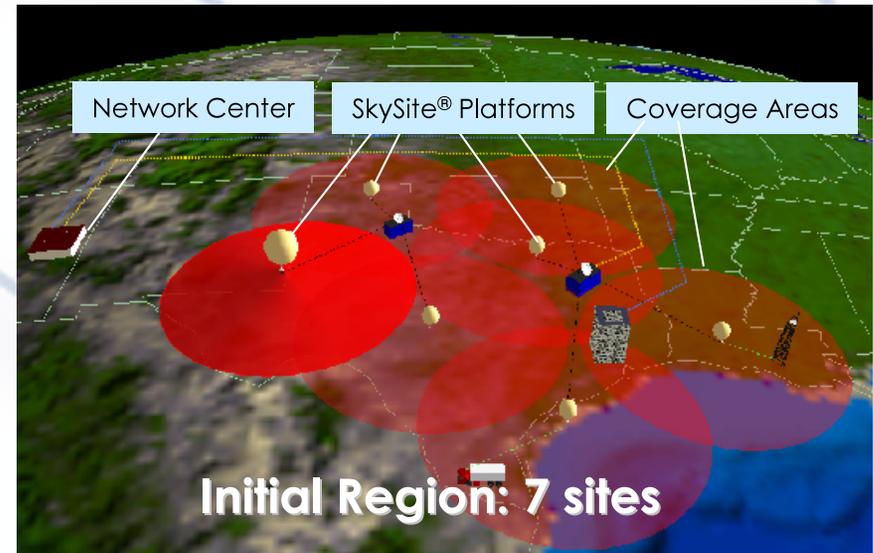
November 16, 2004



Space Data's Current System

Currently deployed 24 x 7 operation

- Oil & gas telemetry
 - 75,000 wells need new service due to loss of CDPD
- Local / regional fleet tracking
- A single SkySite® Platform covers a 420-mile diameter circle



Each SkySite® rises to 100,000 feet and levels off. In the uniform winds at that altitude, a constellation of interlocking SkySites® float in unison to blanket large regions with coverage. New SkySites® are launched every 12-24 hours to replace the previous constellation which is taken down, recovered and reused.

ATG Licensing Proposals

Two exclusive licenses produce best competitive results.

- 2.5-3.0 MHz license can support CDMA technology.
- 1.0 MHz license can provide voice and SMS service that is competitive with larger ATG licensee.
- 1.4-1.5 MHz license can support technologies such as iDEN and GSM to provide a variety of services, including voice, Internet access, and SMS to ATG customers.
 - At least 1.4 MHz is needed to support data to users (WiDEN (80 Kbps) requires four 25 kHz paired channels with a reuse of 7).
 - Licenses smaller than 1.4 MHz support voice/low speed data.
- Stratospheric platforms are ideally suited for providing ATG services.
 - Adaptable to market demand – total coverage from fewer sites scaling to many sites as market grows.
 - No near-far interference eliminates need for guard bands.
- Incumbent's operations can be protected during the transition to the new licensing scheme.

ATG Licensing Proposals (Cont.)

- Exclusive 4 MHz license
 - Retains non-competitive ATG market.
 - Satellite providers are not viable intermodal competitors.
 - Not generally available on U.S. domestic flights.
 - Cost of deploying and using satellite services prohibitively expensive.
 - The FCC cannot assume that licensees in new flexible use allocation may provide competitive ATG services.
 - Promotes inefficient use of scarce ATG spectrum because 3 MHz of spectrum at most is needed to provide wideband ATG services.
 - Even if service rules allow the exclusive licensee to partition, disaggregate, or lease 1 MHz of its 4 MHz allocation, it is unlikely to do so because it has no incentive to provide a competitor with access to the ATG market.

ATG Licensing Proposals (Cont.)

- AirCell's and Boeing's proposal to assign two overlapping 3 MHz licenses by adding 125 kHz guard band does nothing to solve technical and regulatory obstacles associated with overlapping licenses.
 - Significant technical risk
 - Inflexible design
 - Rigid fixed site locations
 - Significant, ongoing technical coordination between licensees will make it difficult for licensees to react to changes in market demands and technologies
 - Requires the FCC to promulgate detailed base station location, sharing, and interference requirements
 - Requirements become even more complicated to craft if each licensee uses different technologies / protocols.

Guard Band Allocation May Leave Valuable Spectrum Fallow

- Commenters advocate an additional 125 kHz guard band for each ATG band segment.
- Existing cellular channelization plan suggests that narrower guard bands are adequate.
 - Near-far interference more constrained for ATG than cellular.
 - Guard band use in adjacent bands should be analyzed.
- CDMA ATG network can operate adjacent to Cellular B Block, much of which is CDMA technology, without interference (within cellular band, carriers stack CDMA channels next to each other with no guard band).

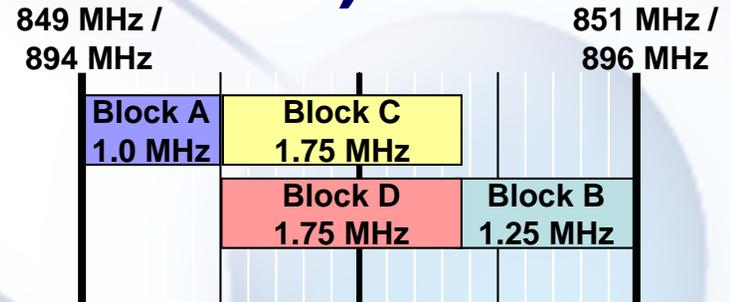
Combinatorial Bidding Offers Viable Market-Based Compromise

- Exclusive license allocations would best serve the development of the ATG market and the public interest. Space Data suggests a compromise that takes into account other licensing proposals.
- The ATG auction can be designed so that bidders determine whether exclusive or overlapping licenses are assigned, and thus the best use of the four MHz of ATG spectrum.
- The ATG spectrum can be divided into auctionable frequency blocks, which can be combined.

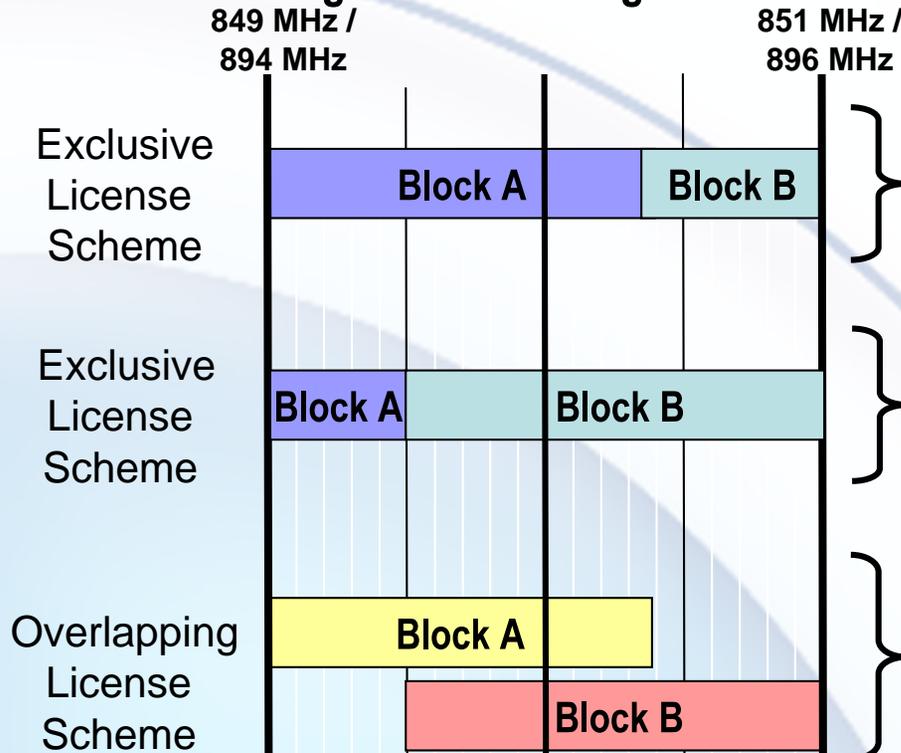
Proposed Four-Block Bidding Alternative (Guard Band Allocation*)

Proposed scheme with package bidding:

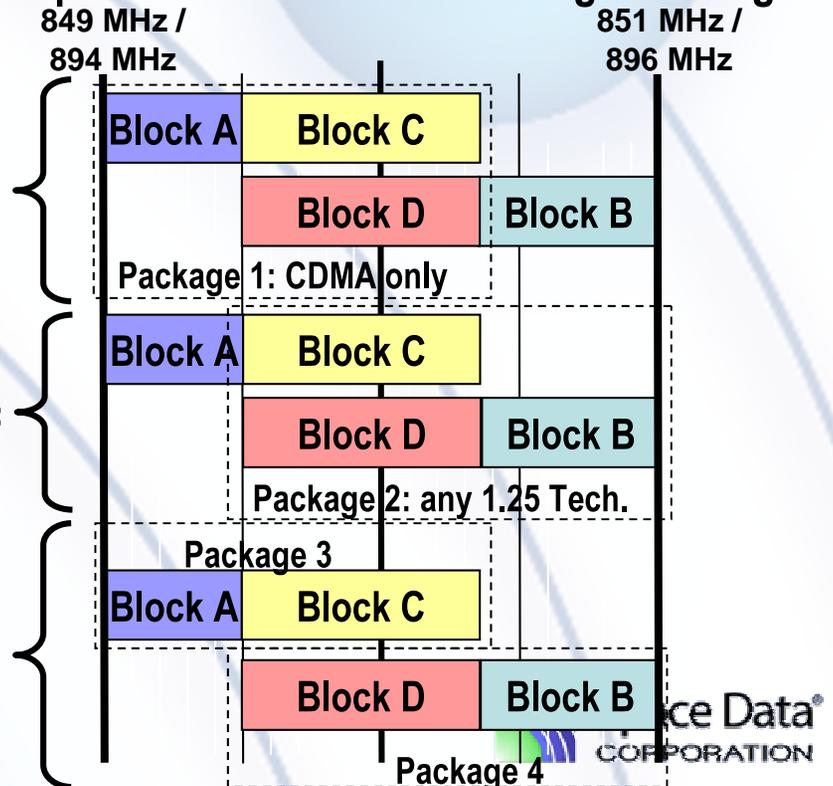
- A Block: exclusive use 1.00 MHz
- B Block: exclusive use 1.25 MHz with initial period of sharing with legacy ATG
- C Block: shared use of 1.75 MHz
- D Block: shared use of 1.75 MHz



Current Licensing Schemes being Considered



Equivalent Schemes w/ Package Bidding



*Size of licenses can vary depending upon amount of guard band.

Solution to ATG Allocation

- A single exclusive license proposal grants an ATG monopoly.
- There are two ways to avoid this result.
 - Assign two-exclusive licenses: it is realistic and feasible to implement from a technical and policy perspective.
 - Implement combinatorial bidding at auction: the ATG spectrum can be divided into auctionable frequency blocks, which can be combined based upon the needs of the bidders.
- These proposals allow for a competitive market in which market participants decide the best use of the 4 MHz of ATG spectrum.