Summary of Report & Order in
Docket 02-55
Improving Public Safety Communication in the 800 MHz Band

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The FCC came to a final decision on how to address the interference received by public safety and other non-cellular 800 MHz systems from Nextel and other cellularized 800 MHz systems in July, 2004. The text of the decision was released in August 2004. You can access the text on the FCC's website http://hraunfoss.fcc.gov/edocs_public/attachment/FCC-04-168A1.pdf.

The FCC decided to address the interference in both the short term – establishing criteria for interference abatement – and the long term – reconfiguring the 800 MHz band to separate cellular and non-cellular operations.

This document is a direct summary of the report and is divided into segments as follows:

New Interference Rules

800 MHz Band Reconfiguration

New Interference Rules (90.672-90.675)

New interference protection entitlement and abatement rules are effective 60 days after the Order is published in the Federal Register

Definition of Unacceptable Interference

- Unacceptable voice interference occurs when a receiver in good working order, meeting the minimum receiver standards of 90.672(b) and the median desired signal strengths, receives an undesired signal or signals which cause the measured Carrier to Noise plus Interference (C/(I+N)) ratios of the receiver to be less than 20 dB.
- For data radios, unacceptable interference occurs when the median signal levels and receiver standards are met and the radios experience a bit error rate that exceeds the value specified by the manufacturer for reliable communications.
- Definition of 'unacceptable interference' applies only to 800 MHz.

Entitlement to Protection – 851-861.35

Minimum Measured Input Signal Powers

- PS, CII and other non-cellular 800 MHz licensees must receive at least a minimum measured input signal power of -101 dBm for portables and -104 dBm for mobiles to qualify for interference protection in the 851-861.35 band segment.
- Only licensees with a minimum signal strength as defined above are entitled to interference protection. (Para. 106)

Receiver Performance Standards

- For full interference protection, licensees must use mobile or portable voice radios that meet or exceed the following minimum performance standards:
  - Mobiles: 75 dB intermodulation rejection ratio; 75 dB adjacent channel rejection ratio; -116 dBm reference sensitivity
  - Portables: 70 dB intermodulation rejection ratio; 70 dB adjacent channel rejection ratio; -116 dB, reference sensitivity
- Receivers who do not meet these minimum requirements will be protected, but at higher power levels.
- Para. 105 says that **'mandatory protection of systems to a level below -104 dBm would impose an excessive burden on ESMR and cellular carriers…. Nevertheless, ESMR and cellular telephone licensees must respond to complaints of interference even at these low signal levels and, when possible, voluntarily assist the affected licensee if to do so does not cause the ESMR or cellular telephone carrier undue cost or capacity limitations."**
- Although the Order repeatedly refers to PS and CII licensees, the FCC intends the interference protection to extend to all non-cellular 800 MHz incumbents, including B/ILT and non-cellular SMRs. (footnote 12)

Responsibility for Interference Mitigation Pre- and Post-Re-banding

- ESMR and Cellular carriers are responsible for abating unacceptable interference (Para. 128)
- If more than one ESMR/Cellular carrier is responsible for causing unacceptable interference, then all involved are jointly responsible for correcting the interference. (Para. 130)
- All involved parties are required to respond to every complaint of interference from a non-cellular system 'with full cooperation and utmost diligence' (Para. 130)
- If an ESMR/Cellular carrier can prove it is not causing the interference, it will not have any responsibility. (Para. 130)
- ESMR/Cellular have the discretion to make any necessary changes to their or the non-cellular system to resolve the interference, including furnishing the affected system with additional base stations or more interference-resistant subscribers. (FN 362, pg. 72)

Interference Abatement Procedures

Notification Process

- ESMR/Cellular operators in or adjacent to the 800 MHz band must set up a common electronic means of receiving interference complaints within 30 days of the effective date of the R&O (90 days after publication in Federal Register)
    - Must be a single point of contact such as a website
    - Initial complaint should include:
        - Specific geographic location and time(s) the interference occurs
        - A description of the severity and scope of the interference
        - Source of the interference if known
        - FCC licensing information of the complainant
        - Single point of contact for complainant
    - Access to notification system:
        - Parties involved in interference complaint
            - Those using the system must agreed to non-disclosure provisions
        - FCC's Enforcement Bureau
        - **Not available** to general public
- ESMR/Cellular operators with cell sites within 5,000 feet radius of the reported interference must respond to the complaint.
    - ESMR/Cellular operators with sites outside the 5,000 foot radius must respond if it can be shown that those sites are contributing to the interference.

Response to Interference Complaints

- ESMR/Cellular operators with cell sites within 5,000 feet radius must respond as follows: (paragraphs 136-138, 140)
    - Complaint from PS/CII systems
        - Response required within 24 hours

        - Complete analysis and identification of the interference and begin to correct it within 48 hours.
        - Time periods can be extended if the complainant agrees in writing
    - Complaint from non-PS/CII
        - Response required within 48 hours
        - Complete analysis and identification of the interference and begin to correct it within 96 hours.
        - Time periods can be extended if the complainant agrees in writing

Public Safety "Safety Valve"

- Public Safety 'Safety Valve' (para. 140)
    - Only available to PS licensees
    - If interference is causing a 'clear and imminent danger to life or property', PS licensees can ask the FCC to require the party(ies) causing the interference to shut down until the interference is resolved.
    - PS licensees who wish to request invocation of the 'safety valve' must follow these steps:
        - Prepare an affidavit or statement under penalty of perjury containing the following information:
            - Must be made by an officer or executive of the affected PS licensee
            - Must completely describe the basis of the claim of clear and imminent danger
            - Must be stated to be on personal knowledge or belief after due diligence
            - May not be made by a contractor or other 3rd party
        - Statement or affidavit must be served on the ESMR/cellular carrier by hand-delivery or receipted fax. (ESMR/Cellular carrier does not have to cease operations until the FCC reviews the request).
        - A copy of the statement or affidavit must be sent to the FCC's Wireless Telecommunications Bureau, 445 12th St., NW, Washington, DC 20554, to the attention of the Public Safety and Critical Infrastructure Division (PSCID).
        - The request FCC's WTB PSCID will evaluate the claim and if it determines that there is a clear and imminent danger to life or property, the WTB will forward the request to the Enforcement Bureau for action.

Interference Abatement

- The parties involved in the interference are free to decide which interference abatement method they will use. The Best Practices Guide and the Motorola Technical Appendix are mentioned as resources (Para. 139)
- Changes to PS equipment will be made at the cellular operator's expense.

- Where interference is being caused by multiple cellular carriers, all will share in the cost of remedying the interference, no matter how small a carrier's contribution to the interference problem. (Para.115)
- Encourage all 800 MHz licensees to anticipate and avoid interference when designing or modifying systems. (Para.115)
- Expect ESMR and cellular licensees to continue to use Enhanced Best Practices until the completion of band reconfiguration. (Para.122)
- Rejected recommendations to impose mandatory restrictions on all ESMR & cellular systems with respect to maximum cell ERP, combiner technology and antenna pattern characteristics. Also declined to establish stricter OOBE limits for base stations in 861-895 MHz.
    - If additional restrictions become necessary, the FCC has reserved the right to impose them in the future.
- ESMR/Cellular operators are to provide all technical equipment and personnel needed to determine the most effective method of resolving the interference. (Para. 139)
- FCC indicates that it will monitor interference complaints to be sure that they are being resolved both before and after re-banding. FCC suggests (but does not require) that affected parties keep records of interference complaints and resolution that could be made available to the FCC upon request. (FN 384, pg. 76)

<u>Pre-Notification Requirements</u> (Para. 124-127)

- 10-Day Prior notice required
    - ESMRs & cellular operators:
        - Must provide prior notice to any PS/CII licensee who requests it when installing new sites or modifying existing sites
        - Not required to provide prior notice to non-PS/CII licensees although FCC encourages them to provide the information to non-PS/CIIs who ask for it.
    - PS/CII licensees:
        - Must provide prior notice to ESMR and cellular operators if:
          1) They have requested prior notice from them or
          2) If the ESMR/cellular operator asks for prior notice
    - Non-PS/CII licensees:
        - Can request prior notification but ESMRS/Cellular not required to provide it
        - Apparently have to give prior notification to ESMR/Cellular if requested (Para. 126)
- Prior Notifications should include:
    - Location
    - ERP
    - Antenna height
    - Frequencies
- PS/CII licensees do not have the authority to accept or reject the proposed facilities or to require changes in the operating parameters.
    - Notification is for information purposes only.

- ESMR/Cellular operators can make voluntary changes to cell site if notified of potential interference.
- Notification also helps to identify source of interference if it occurs after a new site goes in.

Technical Issues Addressed by Band Reconfiguration

- Moving ESMR/Cellular operations out of the interleaved channels and to the high end of the 800 MHz band will enable those licensees to avoid some intermodulation interference. However, the channels could still, if combined in a receiver, generate intermodulation interference.
- Abatement of unacceptable intermodulation interference will require more than segregating cellular architecture from non-cellular architecture systems. (Para. 143)
- ESMR licensees will have to 'make careful choice of channel selection such that two or more channels at a cell do not produce an intermodulation product falling on a PS or CII channel.' (Para. 143)
  - Putting ESMR systems into contiguous spectrum will give them greater flexibility to select channel pairs. (Para. 144)
  - Careful coordination between ESMR/cellular licensees will help to avoid intermod caused by combining ESMR and cellular frequencies at a site. (Para. 144)
  - Coordination between two licensees is more complicated especially when systems use dynamic channel allocation, changing the frequencies in a cell on a regular (perhaps hourly) basis.
  - Cellular systems using CDMA technology (wider bandwidths producing wider IM products) could affect even more frequencies. (Para. 144)
  - Moving PS into the lower end of the band and limiting their operations to between 851-862 MHz will allow manufacturers to use narrower filters to attenuate potentially interfering signals higher in the band. (Para 145)
  - Re-banding will allow ESMR licensees to replace current base station transmitter duplexers with new duplexers that will 'roll-off' RF energy immediately below 862 MHz. (Para 146)
  - FCC expects that after re-banding, manufacturers will design PS radios to cover only the 800 band below 862 MHz because no PS system will be operating above 862 MHz. (Para.146)

Signal Level & Receiver Requirements

Criteria	Mobile	Portable
Median Desired Signal Strength	-104 dBm or higher	-101 dBm or higher
Minimum Receiver Performance Standards[1]	75 dB intermodulation rejection; 75 dB adjacent channel rejection; -116 dBm reference sensitivity	70 dB intermodulation rejection ratio; 70 dB adjacent channel rejection ratio; -116 dBm reference sensitivity

Interference Abatement Deadlines After Complaint Is Filed

ESMR/Cellular Action	Deadline PS/CII	Deadline Non-PS/CII
Initial Response	24 hours	48 hours
Perform Interference Analysis & begin abatement process	48 hours	96 hours
Extend deadlines	Complainant must agree in writing	Complainant must agree in writing
Shut Down "Safety Valve"	Only PS may request shut down of ESMR/Cellular if interference poses 'clear and imminent threat to life or property'	Not available

800 MHz Reconfiguration (paragraphs 149-158)

Critical Infrastructure Industries

- CII (Critical Infrastructure Industries) eligibles are given special status in this rulemaking in that:
  - Incumbents do not have to relocate out of 854.0125-854.7375 (Para. 153)
  - Have access to any channels vacated by Nextel or other incumbents two years before other Part 90 eligibles. (Public Safety has sole access for the first three years after the channels become available).
- CII (Critical Infrastructure Industries) are defined as:
  - Those entities, outside of the scope of the 'public safety radio service' definition of 47 U.S.C. Section 337(f)…. But which operate 'public safety' radio services within the scope of Section 309(j)(2) of the Act. 309(j)(2) defines 'public safety radio services' as including private internal radio services used by State and local governments and non-government entities, including emergency road services provided by not-for-profit organizations, that: (i) are used to protect the safety or life, health, or property; and (ii) are not made commercially available to the public. Examples are 800 MHz systems that provide private internal radio services used by utilities, railroads, metropolitan transit systems, pipelines, private ambulances, volunteer fire departments, and not-for-profit

[1] Class A receiver specifications from TIA-603 and ANSI/TIA-102.

organizations that offer emergency road services, such as the AAA. (FN11)

- Any CII licensee who converts to CMRS will fall outside the CII definition and will no longer be eligible for any CII benefits. (FN 448)

New NPSPAC Channels

- 851-854 MHz/806-809 MHz, Channels 1-230, 25 kHz channels spaced at 12.5 kHz, just as NPSPAC is currently channelized.
- Licensees currently at 866-869 MHz will move to 851-854 MHz
- Nextel and other incumbents in 806/851.0125-808.9875/858.9875 will move out to frequencies at 854.0125 and above (Para. 151, pg. 83)

Interleaved Channels

- 809-815 MHz/854-860 MHz
- Channels 231-470, (25 kHz bandwidth channels spaced every 25 kHz)
- Public safety, B/ILT, and SMR channels interleaved
- Incumbents who are licensed between 854.7375-859.9875 will not have to relocate. (Para. 151, pg. 83)

854.0125-854.7375 (Channels 231-260)

- Non-PS/CII (Critical Infrastructure Industries) incumbents will have to relocate to frequencies above 854.7375 (Para. 153)

Expansion Band

- 815-816 MHz/860-861 MHz
  - Channels 471-510, 25 kHz bandwidth channels spaced every 25 kHz
- B/ILT and SMR channels interleaved.
- May also be used to house non-Nextel ESMR systems
- No public safety system will be required to move to the expansion band
- Any PS system currently licensed in the expansion band can remain or ask to be relocated to a frequency below 860. (Para. 151, pg. 83)
- Will receive full interference protection (Para. 154)
- Creation of the expansion band required the FCC to swap 12 PS frequencies in 860 MHz with 12 frequencies below 860 MHz. (Para. 155)
- Non-cellular SMRS will now have access to the old PS channels in 860 MHz
  - The old PS frequencies were:
    - 860.2125
    - 860.2375
    - 860.2625
    - 860.4375
    - 860.4625
    - 860.4875
    - 860.7125
    - 860.7375

        - 860.7625
        - 860.9375
        - 860.9625
        - 860.9875
- Non-cellular SMRS operating on the new PS channels are grandfathered indefinitely and may file license modifications (Para. 156)
    - Grandfathered non-cellular SMRS must operate on a strict non-interference basis and
    - Are subject to pre-coordination of any new or modified operations
- Old SMR frequencies/new PS frequencies are available to PS only.(Para. 157)
    - The new PS frequencies are:
        - 856.0125
        - 856.0375
        - 856.0625
        - 856.0875
        - 857.0125
        - 857.0375
        - 857.0625
        - 857.0875
        - 858.0125
        - 858.0375
        - 858.0625
        - 858.0875

Guard Band

- 816-817 MHz/861-862 MHz
- Channels 511-550, spaced every 25 kHz
- 40 channels available to any 800 MHz licensee
- No PS or CII incumbent will be forced to relocate to the Guard Band
- Incumbents will move to the Guard Band on a voluntary basis
- Could be a home for non-Nextel ESMR licensees
- Guard band licensees above 861.35 will receive less interference protection than those operating in lower portions of the band. (Para. 151, pg. 84)

Cellular Portion

- 817-824/862-869 MHz
- Nextel and potentially other ESMR incumbents (Para. 162)

Eligibility for Frequencies Vacated by Nextel

- Frequencies 854.0125 and above vacated by Nextel and not needed for re-banding existing incumbents will be available exclusively to PS for three years.
- Frequencies made available by incumbents moving to the Expansion or Guard Bands will also be available exclusively to PS for three years.
- After three years, these frequencies will be available to both CII and PS for two additional years

- After 5 years, the freed-up frequencies will be available to any Part 90 eligible on an equal, first-come, first-served basis.

ESMR Relocation Options

- FCC believes that 'confining licensees such as Southern LINC to operation below 862 MHz is not optimal from an interference protection standpoint and could adversely affect such licensees' ability to provide adequate service to its subscribers in the future. (Para. 161)
- As an incentive to relocate, FCC gives ESMR licensees three options:
    - 1) Relocate all systems in a market into the ESMR portion of the band and share spectrum w/Nextel
    - 2) Remain in the non-cellular portion, but relocate systems as close as possible to the ESMR portion of the band. Frequencies in order of preference:
        - #1 861-862 MHz guard band
        - #2 860-861 MHz expansion band
        - #3 channels below 860 MHz
            - Licensees on frequencies below 860 will be subject to strict non-interference regulations and subject to pre-coordination of new or modified operations
    - 3) Remain on their existing frequencies in the non-cellular portion of the band, again subject to strict non-interference regulations and pre-coordination of new or modified operations. (Para. 162)
- EA-based licensees who choose to relocate to the ESMR band will transfer on a channel-by-channel basis, such that they have exclusive incumbent-free, use of the new channels in the EA. (Para. 163)
        - Combination EA-Site-based incumbents can move their site-based operations into the ESMR band if they:
            - Currently hold an EA license in the relevant market and
            - Are using the site-based license as part of a cellular-architecture system in that market as of the date of the publication of the R&O in the Federal Register.
        - The EA-licensees site-based operations will then convert to an EA-wide geographic license.
- Non-Nextel ESMR licensees who:
  a) volunteer to move to the Guard Band, or
  b) must move to the Expansion Band, or
  c) are directly below the Expansion Band,
  must be given comparable facilities for site-based licenses and **exclusive use** of their new channels in the EA for EA-based licensees. (Para. 163)
- In some markets, there may not be enough spectrum in the ESMR band to accommodate both incumbents already there and new ESMR licensees relocating from frequencies below 862 MHz.(Para. 164)

Southern LINC

- Currently holds a large number of licenses in the interleaved portion of the band as well as some General Category licenses. (Para. 164)
- There is not enough room in the ESMR band to accommodate both Nextel and Southern LINC. (Para. 164)
- Southern LINC has said it intends to move into the ESMR portion of the band (Para. 167)
- Nextel and Southern LINC have been negotiating an agreement to expand the ESMR portion of the band by 5 MHZ (to 858.5 MHz) in the sections of the country where Southern LINC is operating. (Para. 164)
- This agreement is not yet final but the FCC has decided to define the ESMR band in the southeastern portion of the US as follows:
    - ESMR band
        - 858.5-869 MHz
    - Expansion Band
        - 857.5-858.5 MHz
        - All licensees operating in 857-858.5 will be afforded the same interference protection as non-Southern LINC region licensees (Para. 166)
    - The Southeast ESMR Band is valid in certain counties in the following states (for a complete list of the SE ESMR Band, see Appendix G of the R& O, page 251-252):
        - Alabama
        - Florida
        - Georgia
        - Louisiana
        - Mississippi
        - North Carolina
        - South Carolina
        - Tennessee
- ESMR licensees operating on the expanded ESMR band (on 858-861 MHz) in the Southern LINC Region, must make all necessary accommodations to provide non-cellular licensees outside the Southern LINC counties the minimum required co-channel spacing. (Para. 169)
- Southern LINC and Nextel must complete an agreement for the equitable distribution of 800 MHz channels in the "Southern LINC Region" and submit it to the FCC for review no later than 30 days after publication of the Report & Order in the Federal Register. (Para. 167)
- Agreement must be equitable to all 800 MHz licensees (Para. 167)
- Agreement must include:
    - Mutual non-disclosure provisions
    - A clear delineation of the costs to be borne by each party
    - A proposed band reconfiguration schedule consistent with the obligations imposed on Nextel in the R&O

    - An engineering analysis demonstrating that the channel plan can be implemented consistent w/PS and B/ILT licensees retaining the spectrum necessary to accommodate them (Para. 167)
- FCC Chief of the WTB will review the agreement and resolve any disputes. (Para. 167)
- If Nextel and Southern LINC cannot come to agreement by the deadlines, they will submit their differences to the TA who will attempt to resolve the dispute. (Para. 168)
- If the TA cannot resolve the disputes, the matter will be forwarded to the Commission for *de novo* review. (Para. 168)
- FCC may resolve disputes in this area or any area by making a *pro rata* distribution of channels which could reduce the number of channels held by Nextel. (Para. 168)
    - Nextel has spectrum at 900 MHz and is getting spectrum at 1.9 GHz to offset any shortfall (Para. 168)
- In moving to the ESMR band, Southern LINC is getting clear, contiguous spectrum arguably more valuable than the spectrum it now has. (Para. 168)

Permitting Additional Non-ESMR Cellular Architecture Systems in the 800 MHz Band

- Some CII commenters argued that prohibiting cellular systems from the non-cellular portion of the 800 MHz band would impose a hardship on CII licensees who need to transition to cellular architecture. (Para. 170)
- FCC is concerned that allowing non-ESMR cellular architecture could replicate the unacceptable interference being addressed by the instant decision, but does not want to unnecessarily inhibit innovative technology. (Para. 170)
- FCC believes that non-CMRS cellular architecture shouldn't have such high user demand and high density that it would require extensive deployment of low site cells. (Para. 170)

High-Density Cellular System Definition

- FCC provides definition of high-density cellular systems:
    - A system having more than five (5) overlapping interactive sites featuring hand-off capability; **and**
    - Any one of such sites has an antenna height of less than 100' above ground level with an HAAT of less than 500' and more than twenty (20) paired frequencies. (Para. 172)

Waiver

- Systems with sites that do not meet both criteria, can operate without a waiver. (Para. 172, 173)
- Systems with sites that do match the definition must request a waiver for only those sites that match both parts of the definition. (Para. 173, FN 455)
- Waivers must include:
    - A persuasive showing of need and
    - A demonstration of non-interference (Para. 173)

- Any waivers granted will include a continuing non-interference condition. (Para. 173)
- Cellular architecture systems whether operating under waiver or not, must not cause unacceptable interference to non-cellular systems. (Para. 173, FN 457, Para. 174)

Re-banding in Canadian and Mexican Borders

- Many commenters had expressed concern about how the Consensus Party's Re-banding Plan would impact systems in the Canadian and Mexican border areas. Specifically, the Consensus Plan does not:
  - Maintain the existing Mexican and Canadian border mutual aid channels, determined by international agreements with those countries (Para. 175)
    - The five channels identified by current international agreements for mutual aid between the US and Canada and Mexico are:
      - 821.0125/866.0125 MHz (Calling channel)
      - 821.5125/866.5125 MHz
      - 822.0125/867.0125 MHz
      - 822.5125/867.5125 MHz
      - 823.0125/868.0125 MHz (FN 458)
  - Address how Canada and Mexico will be compensated for retuning or replacement of equipment necessary in order to operate on the new mutual aid channels (Para. 175)
  - Maintain comparable spectrum for the various pools after re-banding – for instance in some Canadian border areas PS lost frequencies while ESMR gained frequencies. (Para. 175)
  - In the Mexican border, after band reconfiguration many PS frequencies would have been unusable due to existing non-border incumbents who would have blocked new systems. (Para. 175)
  - Is silent on how moving US NPSPAC licensees into Canadian or Mexican primary channels would impact those countries. (Para. 175)
  - And does not address impact of US ESMR operations on the former US NPSPAC channels to Canadian or Mexican NPSPAC licensees. (Para. 175)
- Today, the border areas are:
  - Canada 0-87 miles from the border
  - Mexico 0-68.4 miles from the border.
  - "Double-border" issues arise today in that a frequency may be in one pool in the 'nationwide' US, but in a different pool in the Canadian or Mexican border
    - FCC notes that if re-banding results in a frequency being allocated to non-cellular in the overall US but to ESMR/Cellular pool in the border, the ESMR/Cellular licensee would have to protect the non-cellular licensee from unacceptable interference. (Para. 176)
- Re-banding in the Mexican and Canadian borders will require new treaties

- FCC is working w/Canada and Mexico to develop a mutually agreeable border plan. First priority is given to maintaining the capability for cross-border mutual aid communications (Para. 176)
- Then, double border issues will be addressed. (Para. 176)

- Systems in the border regions will continue to operate under current agreements until new treaties are negotiated and approved. (Para. 176)
- Nextel must secure funds necessary to ensure reconfiguration of the border regions before its obligation to secure the cost of re-banding and the letters of credit (LOC) will terminate. (Para. 183)
  - If the 800 MHz reconfiguration has not been completed in the border regions at the end of 36 months, the TA will calculate the costs to reconfigure the borders.
    - Within 30 days of receiving this estimate, Nextel will either extend the life of the original LOC or obtain a separate LOC to cover theses costs. (Para. 332)

Cost Responsibility

- Nextel will pay for all channel changes necessary to implement the re-banding. (Para. 178) 800 MHz licensees can divide the costs with Nextel if they wish. (FN 474)

Comparable Facilities

- Relocated licensees must receive comparable facilities (Para. 178)
  - Comparable facilities are defined as: (Para. 201, pg. 108)
    - Equivalent channel capacity (same number of channels with the same bandwidth that is currently available to the end user).
    - Equivalent signaling capability, baud rate and access time
    - Coextensive geographic coverage
    - Operating costs.
  - If the configuration of the system entails a significant disruption of service during the process, Nextel must fund the installation of a redundant system. (Para. 201, pg. 109)
- Licensees who elect to relocate voluntarily to the ESMR block must receive clear, incumbent-free replacement spectrum. (Para. 178)
  - Nextel is responsible for clearing any incumbents affecting the replacement channel. (Para. 178)
- FCC's band reconfiguration plan differs from the Consensus plan, 'most particularly with respect to considerations affecting efficient use of the spectrum (Para. 179).
- FCC decided that it would be 'unwise in the extreme to proceed with band reconfiguration without making it clear that Nextel is obligated to cover the entire cost thereof, with no cap'. (Para. 179)

Nextel's Letter of Credit

- Nextel must provide an irrevocable letter of credit securing $2.5 billion. (Para. 182)
    - FCC emphasizes that the $2.5 billion security is not a cap on Nextel's obligations for 800 MHz band reconfiguration or 1.9 GHz band clearance. (FN490)
- The letter of credit will be the funding source for the non-Nextel 800 MHz re-banding costs and potentially a source for payment to the US Treasury. (Para. 182)
    - Nextel must directly pay its own relocation costs as well as reimburse UTAM, the relocation of BAS incumbents, compensation of the TA and the Letter of Credit Trustee. These payments do not come out of the letter of credit funds.
    - FCC provided a model letter of credit in Appendix E (Para. 182)
- If the TA ever determines that the letter of credit has insufficient funds to complete band reconfiguration, Nextel will be required to open an additional letter of credit. (Para. 183)
- If the TA documents that the letter of credit has more money than will be needed, Nextel will be allowed to reduce the amount of the letter of credit. (Para. 183)
    - The total aggregate secured by the letter of credit cannot below $850 million. (Para. 183)
- Nextel must secure funds necessary to ensure reconfiguration of the border regions before its obligation to secure the cost of re-banding and the letters of credit will terminate. (Para. 183)

Letter of Credit Trustee

- The letter of credit must specify a trustee, acceptable to the FCC, to administer the funds from the letter of credit and receive the funds from the letter of credit in the event of a Nextel default. (Para. 184).

Consequences if Nextel unable or unwilling To fulfill obligations

- If Nextel is unable or unwilling to fulfill its obligations, the FCC can approve the use of letter of credit funds to compensate the TA and the LOC Trustee for their services. (Para. 185)
    - LOC funds would be applied to relocation of non-Nextel licensees first, then
    - To relocation of Nextel facilities
    - If the funds run out before Nextel's facilities are relocated, any un-relocated Nextel facilities would revert automatically to secondary status.
        - Any un-relocated Nextel facilities could not cause interference to and would have to accept interference from any other 800 MHz licensee. (Para. 185)

Transition Administrator

- FCC believes that using an independent individual or company to serve as a Transition Administrator (TA) subject to FCC oversight is the best approach to ensure that re-banding proceeds on schedule (Para. 191)
- Nextel will pay for the TA's services and staff. (Para. 191)

Qualifications & Search Committee

- TA will:
  - Be an independent party with no financial interest in any 800 MHz licensee (Para. 191)
  - Not be certified as a frequency coordinator by the FCC (Para. 197)
  - Be selected by a TA Search Committee of 800 MHz stakeholders chosen as a cross-section of the viewpoints presented in the proceeding by parties having a vested interest in how the 800 MHz band is reconfigured (FN 510)
    - UTC
    - APCO
    - ITA
    - Southern LINC
    - Nextel

Search Committee Deadlines

- TA Search Committee must:
  - Convene within 15 days of the date of the Report & Order (August 20, 2004) (Para. 192)
  - Select the TA and notify the FCC of the choice within 45 days of the date of the Report & Order (Sept. 20, 2004) (Para. 192)
    - Decision must be by 'super majority' – four of the five members must agree on choice. (Para. 192)
  - Notification to the FCC must include:
    - Disclosure of any perceived potential conflicts of interest of the TA or his or her staff and
    - Set out salary and benefits of ach position in detail (Para. 192)
- 'Upon receipt' of the Search Committee's TA choice, the FCC will issue a PN announcing the appointment (Para. 193)
- If the TA doesn't keep re-banding on track, the FCC will take whatever measures are necessary including appointing a new TASC to select a new TA (Para. 193)

TA's Role

- TA will serve both a ministerial role and function similar to a special master in a judicial proceeding. (Para. 194)
- TA duties include but are not limited to:
  - Obtaining estimates from licensees on the costs of re-banding their systems, including a work schedule

        - Appendix E-Annex E lists basic terms to be included in contracts between Nextel, the TA and the Letter of Credit trustee (Pages 245-249)
        - TA will retain copies of all estimates and make them available to the FCC upon request (Para. 195)
    - Resolving disputes between Nextel and licensees on cost estimates
        - TA may mediate disputes or refer the matter to other forms of dispute resolution.
            - Must review any disputes within 30 days of receiving the dispute from one party and a response for the other party
            - After that, any party can ask for expedited non-binding arbitration which must be completed within 30 days of the TA or other mediator's decision or advice.
            - After that any unresolved issues, may be referred to the Chief of the PSCID, within 10 days of the TA's or other mediator's recommendation. (Para. 194)
                - TA must forward the entire record of the dispute to the FCC, including its recommendation or advice (Para. 194)
                - Chief PSCID has authority to make a decision
            - If the parties wish to appeal the Chief PSCID's decision, they can, within 10 days of the effective date of the initial decision, file a petition for *de novo* review and the matter will be set for an evidentiary hearing before an Administrative Law Judge. (Para. 194)
    - Issuing the Draw Certificate to pay relocation costs. Sample Draw Certificate is given in Appendix E, Annex-B2 (Page 241)
    - Establishing a relocation schedule on a NPSPAC region-by-region basis, prioritizing the Regions on the basis of population. (Para. 195)
        - A Region can be moved up in priority if it is receiving unusually severe amounts of unacceptable interference.
        - The TA may direct that adjoining Regions be reconfigured simultaneously when conditions so require.
        - The TA has the discretion to exclude certain non-PS licensees from a Region's relocation schedule as long as they are eventually relocated prior to the end of band reconfiguration. (FN 514).
    - Coordinate relocation of a NPSPAC Region's NPSPAC channels with the relevant RPC prior to beginning band reconfiguration in a Region. (Para. 195)

Progress Reports

- After band reconfiguration has begun in a given Region, the TA will serve primarily an oversight function. Examples of TA responsibilities are:
    - Monitoring the retuning schedule and resolving delays or referring delays to the PSCID for resolution (Para. 196)

- Coordinating with adjoining NPSPAC Regions to ensure that they are not receiving interference from relocated stations. (Para. 196)
- Providing quarterly reports to the FCC in such detail as the FCC decides to require. The progress reports will include:
  - Certifications by Nextel and the relevant licensees that relocation has been completed and that both parties agree on the amount received from the LOC in connection with relocation of the licensee's facilities. (Para. 196)
  - Report will also include descriptions of any disputes that have arisen and how they were resolved. (Para. 196)
- On the anniversary date of the effective date of the R&O, the TA must provide to the PSCID an audited statement of relocation funds expended to date, including salaries and expenses of TA. (Para. 196)

Overall Relocation Process as Envisioned by the FCC

- **Step 1:** Nextel shuts down its General Category channels and relocates all non-Nextel General Category licensees.
  - Nextel temporarily shifts many of its operations to green space at 900 MHz (Para. 198)
  - During band reconfiguration 90.157 (discontinuance of operation) will not apply to Nextel and non-Nextel stations shut down in order to accommodate the re-banding plan. (FN 516)
- **Step 2:** NPSPAC licensees relocate from 821-824/866-869 MHz to 806-809/851-854 MHz at Nextel's expense. (Para. 198)
- **Step 3:** Nextel relocates its systems from the green space and from the interleaved portion of the band into the vacated NPSPAC channels. (Para. 198)
  - Nextel surrenders rights to spectrum below 862 MHz.
- **Step 4:** Any remaining relocations such as moving PS systems out of the Expansion Band at Nextel's expense. (Para. 198)

Relocation Steps as Envisioned by the FCC

- **Step 1:** TA notifies licensee that its system needs to be relocated (Para. 198)
  - TA will specify a replacement channel for each channel that must be relocated in the licensee's system.
- **Step 2:** Licensee will get an estimate of the cost to reconfigure its system and give that estimate to the TA. (Para. 198)
  - Licensee has to certify that the funds requested are the minimum necessary to provide comparable facilities.
- **Step 3:** TA reviews the estimate (Para. 198)
  - Analyzes it to be sure that it doesn't exceed the cost of providing comparable facilities.
  - If additional information or cost justification is needed, the licensee will be informed and must provide a revised estimate.
- **Step 4:** TA provides the estimate to Nextel. (Para. 198)
  - Nextel reviews and has the opportunity to dispute the estimate.

- **Step 5:** If Nextel disputes the estimate, the TA will facilitate resolution of the dispute. (Para. 198)
    - FCC expects and encourages the licensees to cooperate in resolving disputes so as not to unduly frustrate band realignment.
    - Licensees who fail to act in good faith or unreasonably decline to cooperate may be subject to enforcement action. (FN 518)
- **Step 6:** Once Nextel has concurred with the estimate, the TA will issue a Draw Certificate to the LOC Trustee who will draw down funds and disburse them as instructed by the TA. (Para. 198)
    - Funds can be disbursed to the licensee, a local contractor and/or an equipment manufacturer.
    - Nextel personnel will not be involved in reconfiguring a licensee's system.
    - Funds may be paid as a lump sum or over time in accordance with the contractor's contract with the licensee (FN 519)
- **Step 7:** After system has been reconfigured, the TA will audit the amount spent and either: (Para. 198)
    - Request a second draw to cover reasonable expenses agreed to by Nextel and the licensee that were not initially covered OR
    - Request the LOC Trustee to get reimbursement of any overpayments
- **Step 8:** Licensee begins operating on the new channels. (Para. 198)

FCC expects the TA, the LOC Trustee and Nextel will formalize all these requirements/procedures in a contract. FCC wants to see a draft of such a contract and must review and approve the contract before execution. Appendix E, Annex D (*sic. likely* Annex E) lists the provisions the FCC expects to see in the contract. (Para. 199)

- Within 30 days of FCC approval of the TA, the TA will provide the FCC with a re-banding schedule telling when re-banding will begin in each Region. (Para. 201)
    - The schedule must list a reconfiguration start date for each Region.
    - The schedule must meet these deadlines:
        - Licensees in channels 1-120 must be relocated in 20 Regions within 18 months of the release date of a PN announcing the start date for reconfiguring the first Region.
        - All 55 Regions must be reconfigured within 36 months of the PN announcing the start date for reconfiguring the first Region
        - All systems in all Regions must begin reconfiguration within 30 months of the release of the PN announcing the start date for reconfiguring the first Region (Para. 201)
    - The schedule must detail which option each non-Nextel ESMR in the Region has chosen. (Para. 201)
    - Chief of PSCID has authority to review and approve the schedule
- Thirty days before the reconfiguration start date in a Region, the FCC will release a PN to initiate a three-month voluntary negotiation period. (Para. 201)
    - The PN announcing the start of the 3-month voluntary negotiation period for the first Region will be the trigger for the start of the 36 month reconfiguration period. (Para. 201)

- During negotiations, incumbents may negotiate directly w/Nextel or go through the TA. (Para. 201)
- If no agreement is reached in the 3-month voluntary period, move to 3-month involuntary period w/communications either directly w/Nextel or through the TA. The TA may schedule mandatory negotiation meetings.
- If no agreement is reached after the 3-month involuntary period, both parties are to put their points of dispute in writing and forward them to the TA for resolution.
- If the TA cannot resolve the dispute within 30 days after the end of the 3-month involuntary negotiation period, the TA will forward the dispute to the FCC (Chief of PSCII) w/recommended resolution. FCC will rule on the dispute.

Re-banding Negotiation and Implementation Obligations

FCC is giving all parties involved in relocation flexibility but imposed the following obligations:

- All parties are held to a high standard of utmost good faith in their transactions with Nextel, its designee, the TA, other licensees and the FCC. (Para. 201, pg. 107)

Good Faith

- Good faith factors include:
  - 1) whether the party responsible for paying the cost of band reconfiguration made a *bona fide* offer to relocate the incumbent to comparable facilities;
  - 2) the steps the parties have taken to determine the actual cost of relocation to comparable facilities; and
  - 3) whether either party has unreasonably withheld information essential to the accurate estimation of costs and procedures requested by the other party. (FN 524)
- Parties who fail to negotiate in good faith will be relocated involuntarily and the license modified accordingly by the FCC. (Para. 201, Pg. 108)
- Representations made to the TA will be held to the same standard of truth and candor as representations to the FCC

Relocation Waivers

- Parties who, for technical or other reasons, cannot relocate according to the schedule can request a waiver of the relocation obligation. (Para. 201)
  - Would be a high burden to surmount to get such a waiver
  - Any waiver granted would be on a strict non-interference basis.
- Some commenters have expressed concern over the sensitive nature of information relative to system reconfiguration from a security standpoint. FCC is encouraging, but not requiring, the TA and the affected parties to exercise discretion in disclosing information of a sensitive nature. (Para. 203)

800 MHz Application Freeze

- There is no general freeze on 800 MHz applications. (Para. 204)
- When the FCC releases the PN announcing the start of voluntary negotiations in a Region, it will freeze 800 MHz applications within that Region
  - The freeze will last until 30 working days after the completion of mandatory negotiations for the Region. (7 months after the release of the PN)
  - The freeze does NOT apply to:
    - Applications that do not change frequencies or coverage area
    - Applications filed in order to implement the re-banding (Para. 204)
  - The FCC stated that it would 'do everything possible to minimize the effect the incremental freezes may have on incumbent licensees and new applicants' and directed the TA to make accommodations in the implementation to avoid such adverse effects. (Para. 204)

Tolling of 800 MHz Site-Based Construction Requirements

Some site-based 800 MHz systems are licensed but not yet constructed because they are either within the first year of license grant or are constructing under slow growth. These licensees could face re-banding immediately prior to their construction deadlines. The FCC will allow a licensee to request a waiver of their construction deadline if the licensee can prove that they had begun all the necessary steps to construct the system and the only thing holding them up is either that they are waiting for their new frequency(ies) to be assigned or that they cannot construct on their new frequencies without causing interference to other incumbents. (Para. 205-206)

- If the new frequency can be used immediately without causing interference to other systems, the licensee must construct in compliance with the existing deadline. (Para. 206)
- If not, licensees whose initial construction deadline had not passed or are constructing under slow growth can request a waiver of the construction deadline as follows:

Waiver Requirements

  - Waiver applicants must:
    - Demonstrate that they have begun construction, for example have:
      - Placed a firm order for non-frequency-sensitive equipment
      - Erected a tower,
      - Obtained commitment for tower space, etc. (Para. 205)
  - Two construction extension options exist:
    - Extension until 6 months after the TA has specified the new channel(s), if the new frequency(ies) can be used before band configuration of the Region; OR
    - Extension until 6 months after completion of band reconfiguration in the NPSPAC Region if the new frequency(ies) cannot be used without causing interference to other systems. (Para. 206)

- Licensees whose construction deadlines have passed prior to the release of the R&O will have a 'particularly high evidentiary standard to meet' if they decide to file a waiver of the construction deadline. (Para. 206)
- EA licensees can also request waivers of construction deadlines under these provisions. (Para. 206)

Disposition of Nextel's 900 MHz SMR and 700 MHz Guard Band Block B Spectrum

900 MHz

- FCC is not accepting the Consensus Plan's offer of Nextel's 900 MHz holdings
  - No need for Nextel to give up its service in 900 MHz to provide additional spectrum for non-cellular SMR and B/ILT licensees. No demonstrated need for additional spectrum. (Para. 207)
- FCC believes that Nextel will need its 900 MHz spectrum:
  - As 'green space' during the re-banding. (Para. 207)
  - As compensation for giving up spectrum at 862-869 MHz to non-Nextel cellular architecture systems moving up from below 862 MHz. (FN 543)
- If Nextel wants to offer 900 MHz frequencies on a 2-for-1 basis to incumbent B/ILT licensees, it can do so through private transactions. (Para. 207)
- Since FCC has decided to allow cellular architecture in the 900 MHz band, it precludes its use for PS. (Para. 207)
- 900 MHz Freeze
  - Effective 9/17/04 no applications for new 900 MHz systems will be accepted
  - FCC will continue to accept:
    - Modifications of existing systems subject to existing eligibility and loading requirements
    - Assignments of authorization and transfer of control
  - Those wishing to file for new 900 MHz authorizations can request a waiver of the filing freeze
  - ITA, UTC and AMTA have filed Petitions for Reconsideration of the freeze
    - No FCC response as of 10/7/04

700 MHz

- FCC does accept Nextel's 700 MHz holdings (Para. 207)
  - Not suitable for PS since it is Guard Band spectrum established specifically to buffer PS from CMRS in the 700 MHz band. (Para. 208)
  - Decide disposition of this spectrum in a future rulemaking:
    - Are there PS applications that could be accommodated in it?
    - Should it be allocated to B/ILT eligibles?
    - Would allocating it to B/ILT provide opportunities for PS to get access to 800 MHz frequencies?
    - Are there other, new uses?
    - Should it be re-auctioned? (Para. 209)

Compensation to Nextel for Band Reconfiguration

FCC has determined that:

- It is in the public interest to compensate Nextel for surrendered spectrum and the costs it will incur. (Para. 211)
- Nextel has provided the quickest, most comprehensive and most cost-effective means to solve the PS interference problem. (Para. 211)
- Therefore, it is appropriate for Nextel to receive spectrum rights to the 1910-1915 MHz and 1990-1995 MHz bands. (Para. 211)
    - Reject proposal to grant Nextel spectrum rights in the 2.1 GHz band (Para. 211)
- To guard against an undeserved windfall to Nextel, the FCC took the value of 1.9 GHz spectrum versus Nextel's costs:
    - Value of the spectrum Nextel is vacating;
    - Actual cost of 800 MHz band reconfiguration (including Nextel's costs)
    - Costs incurred in clearing the 1.9 GHz band (Para. 212.)
- Since the costs won't be known until the 800 MHz relocation and 1.9 GHz band clearing is complete, the FCC will require an accounting at the end of the transition period. (Para. 212)

Public Interest Considerations

- Public interest considerations for granting spectrum rights to Nextel (Para. 214):
    - Nextel has to complete reconfiguration of the 800 MHz band regardless of the ultimate cost.
    - Nextel has to secure a $2.5 billion letter of credit. Cost of this LOC is substantial.
    - Nextel may be required to obtain additional LOCs if costs exceed $2.5 billion.
    - Nextel must meet an interim benchmark of retuning channels 1-120 in 20 Regions [*Ed. Note:* within 18 months of the date of the PN announcing the start of voluntary negotiations in the first Region.]
        - If Nextel does not meet this benchmark, the FCC can initiate enforcement activity including fines or license revocation.
    - Nextel must complete band reconfiguration within 36 months.
        - Again, if this benchmark is not met, there is the possibility of fines or license revocation, including the 1.9 GHz licenses (Para. 214)

1.9 GHz Replacement Spectrum

- FCC placed two criteria on selecting replacement spectrum for Nextel:
    - Selection would have to be consistent with the highest and best possible use of the spectrum and
    - There would have to be an acceptable plan for relocating incumbent licensees. (Para. 217)
    - 1.9 GHz has been designated as meeting these criteria.
        - 1910-1915 MHz has been paired with 1990-1995 MHz

        - To be used for the provision of licensed Fixed and Mobile services on a primary basis. (Para. 217)
    - CTIA had suggested that the FCC designate 2.1 GHz rather than 1.9 GHz as the replacement spectrum as Nextel had originally proposed in the White Paper (Para. 219)
    - FCC decided that the record did not support substituting 2.1 for 1.9 and that developing such a record would take too much time; delay is not in the public interest (Para. 221)
- Nextel is assigned a 10-year license to the 1910-1915/1990-1998 MHz bands (Para. 223)

Documentation Required from Nextel

- Nextel will not be permitted to operate at 1.9 GHz until it:
    - Provides the FCC with the following documentation, all due within 60 days of Federal Register publication (Para. 325):
        - Certification that it has obtained an irrevocable LOC that assures that $2.5 billion will be available for band reconfiguration regardless of Nextel's financial condition
        - Specify on the LOC a Trustee acceptable to the FCC to draw upon and disburse funds from the LOC per the TA's instructions.
        - Deliver a legal opinion letter from bankruptcy counsel stating that in a proceeding under Title 11 of the US Code 11 U.S.C. Section 101 in which Nextel is the debtor, the bankruptcy court would not treat the LOC or proceeds of the LOC as property of Nextel's bankruptcy estate under Section 541 of the Bankruptcy code. (Para. 187, Para. 325)
            - The opinion letter must contain detailed legal analysis of the basis of counsel's opinion
            - A draft opinion letter must be submitted for FCC Office of General Counsel review and approval before the final opinion letter is issued
            - Bankruptcy counsel must have a Martindale-Hubbard rate of "A/V" and must satisfy the FCC in all other respects (Para. 187)
        - Supply a letter or letters from any and all parties that have a financial or equitable interest in any existing or proposed 800 MHz system whether in the US, Canada or Mexico connected in any way with Nextel stating that they are bound by the same obligations as Nextel to complete the band reconfiguration.
    - The FCC must approve these documents (Para. 326)
    - Nextel must pay reimbursement to UTAM (Para. 326)
    - Nextel has to file any additional applications, notifications, etc. as the FCC may require. (Para. 326)

1.9 GHz License Conditions

- The 1.9 GHz licenses will be for a 10-year term (beginning from the date the R&O is published in the Federal Register – FN 745) with the following conditions:
    - Operations shall be discontinued in any EA where Nextel fails to timely abate unacceptable interference to any 800 MHz public safety or CII system. (Para. 326)
    - Nextel must reconfigure the 800 MHz band within 36 months.
        - If it does not meet this deadline, the FCC may impose fines and/or revoke licenses including the 1.9 GHz licenses. (Para. 326)
    - All BAS facilities must be relocated within 30 months of the effective date of the R&O (e.g. 30 months plus 60 days after publication in the Federal Register). (Para. 326)
        - If this benchmark is not met, the FCC may impose fines and/or license revocations.
    - The 1.9 GHz licenses cannot be assigned to any one who cannot assume all Nextel's obligations. (Para. 326)
    - Nextel must meet the obligations imposed by the R&O and pay the US Treasury any difference between the value of the 1.9 GHz spectrum and the next sum of the value of spectrum vacated by Nextel plus Nextel's costs in reconfiguring the 800 MHz and clearing the 1.9 GHz band. (Para. 329).

True-Up Process

FCC wants to be sure that Nextel is treated equitably but does not receive a windfall as charged by some commenters. (Para. 329)

FCC is requiring the following financial reconciliation process (Para. 330):

- No longer than 42 months after band reconfiguration begins:
    - Nextel will be given a $1.607 billion credit for its vacated 800 MHz spectrum
    - Nextel will provide the TA with an accounting of funds spent on:
        - Reconfiguring its own systems in the 800 MHz band and
        - Clearing the 1.9 GHz band and
        - Reimbursing UTAM
    - Nextel will also disclose to the TA any funds it receives as reimbursement for clearing the 1.9 GHz band
    - The TA will provide an accounting of the money spent to reconfigure the 800 MHz band, including its salary and expenses. (Para. 330)
        - The accounting must include certifications from each relocated licensee that all necessary reconfiguration work has been completed and that Nextel and said licensee agree on the sum paid for the work. (Para. 330)
    - If the expenses and credits total less than the value of the 1.9 GHz spectrum, Nextel will pay the US Treasury an amount equal to the shortfall. (Para. 330)

        - FCC will release a PN announcing the amount to be paid to the Treasury
        - Nextel will pay the Treasury within 30 days of the PN.
    - If the 800 MHz reconfiguration has not been completed in the border regions at the end of 36 months, the TA will calculate the costs to reconfigure the borders.
        - Within 30 days of receiving this estimate, Nextel will either extend the life of the original LOC or obtain a separate LOC to cover theses costs. (Para. 332)

Service Pool Consolidation – PCIA Petition

PCIA had requested that the FCC consolidate the IB and I/LT pools at 800 MHz and 900 MHz. Most commenting on this proposal were utilities and other CII entities who opposed it. (Para. 333)

- Concern that business radio users would dominate the band and hinder CII access to spectrum. (Para. 333)
- Boeing expressed concern that CMRS would take over PMRS spectrum.
- Exelon suggested that the FCC should prohibit cellular operations in the 900 MHz band if it consolidated the pools in order to prevent the interference problems occurring at 800 MHz. (Para. 333)

FCC is consolidating the IB and I/LT pools at 800 and 900 MHz. (Para. 334)

- Any eligible IB or I/LT entity can apply for any consolidated 800 or 900 MHz frequency. (Para. 334)
- Intercategory sharing between IB and I/LT becomes moot. (Para. 334)
    - Freeze on intercategory sharing of PS channels by IB or I/LT still in effect (FN 762)
- No need to prohibit cellularized operations at 900 MHz because there are no PS operations at 900 MHz to be interfered with. (Para. 334)

Regulatory Flexibility at 900 MHz

In the BBA proceeding (99-87), the FCC changed the rules to allow CMRS operations in the IB and I/LT 800 MHz channels and to allow PMRS licensees to convert their licenses to CMRS. (Para. 335. In this docket, the FCC asked for comment on whether it should do the same at 900 MHz. (Para. 335)

Most commenters supported allowing CMRS operations in 900 MHz PLMR spectrum. (Par. 336)

FCC will allow CMRS operations on 900 MHz PLMR spectrum and allow existing 900 MHz PLMR licensees to convert to CMRS. (Para. 336-337)

- In some cases, Nextel will need to use 900 MHz spectrum to make up for spectrum it will lost at 800 MHz to accommodate relocating ESMR licensees. (Para. 336)
- No concern about unacceptable interference from ESMR operations in 900 MHz because there is no PS allocation at 900 MHz (Para. 336)

- Plus, ESMR systems constructing ”from the ground up” will be able to consider interference abatement when designing their systems (Para. 336)
- Nevertheless, if the FCC finds out that the interference situation at 900 MHz is becoming ‘unfavorable’ it will not hesitate to act. (Para. 336)

Effective Date

60 days after publication in the Federal Register

Deadlines

15 days after release of R&O
- Transition Administrator Search Committee must form

45 days after release of R&O
- Transition Administrator Search Committee must notify FCC of choice

30 days after publication in Federal Register
- Nextel must file a written acceptance of all conditions in the R&O **or**
  - File a judicial appeal of the Report & Order (Para. 342)
- Petitions for Reconsideration/Requests for Clarification must be filed.
- Nextel and Southern LINC must come to an agreement on the equitable distribution of 800 MHz channels in the “Southern LINC Region” and submit it to the FCC for review (Para. 167) See Southern LINC Section for details.

60 days after publication in Federal Register
- New Rules go into effect
- ESMR & cellular carriers are strictly responsible for abating unacceptable interference (para. 128)

90 days after publication in Federal Register
- Cellular-architecture systems in or adjacent to the 800 MHz band (ESMR, Cellular A and B bands) must establish a common electronic means of receiving interference complaints from non-cellular licensees. See Interference Section for details.

18 months After Release of Public Notice announcing date of commencement of 1st Region to Re-band
- All systems on channels 1-120 in 20 NPSPAC Regions must be retuned 30 Months After Release of Public Notice announcing date of commencement of 1st Region to Re-band
- All systems must have commenced reconfiguration. (Para. 201) 36 Months After Release of Public Notice announcing date of commencement of 1st Region to re-band
- All 55 Regions must have completed re-banding (Para. 201)

Triggers

Federal Register Publication

- Petitions for Reconsideration must be filed within 30 days
- Rules Effective 60 days later
- New interference rules go into effect 60 days later
- ESMR & cellular carriers are strictly responsible for abating unacceptable interference (para.128)

Release of PN Initiating the Reconfiguration of the 1st Region

- Within 18 Months, retune systems on channels 1-120 in 20 NPSPAC Regions
- Within 30 Months, all systems must have begun reconfiguration
- Within 36 months, all 55 Regions must be reconfigured.

Equipment Considerations

- Moving PS into the lower end of the band and limiting their operations to between 851-862 MHz will allow manufacturers to use narrower filters to attenuate potentially interfering signals higher in the band. (para 145)
- Re-banding will allow ESMR licensees to replace current base station transmitter duplexers with new duplexers that will 'roll-off' RF energy immediately below 862 MHz. (para 146)
- After re-banding manufacturers will design PS radios to cover only the 800 band below 862 MHz because no PS system will be operating above 862 MHz. (para.146)

Entitlement to Protection – 851-861.35

- Although the Order repeatedly refers to PS and CII licensees, the FCC intends the interference protection to extend to all non-cellular 800 MHz incumbents, including B/ILT and non-cellular SMRs. (footnote 12)
- PS, CII and other non-cellular 800 MHz licensees must receive at least a minimum measured input signal power of -101 dBm for portables and -104 dBm for mobiles to qualify for interference protection in the 851-861.35 band segment.
- Only licensees with a minimum signal strength as defined above are entitled to interference protection. (para. 106)
- For full interference protection, licensees must use mobile or portable voice radios that meet or exceed the following minimum performance standards:
    - Mobiles: 75 dB intermodulation rejection ratio; 75 dB adjacent channel rejection ratio; -116 dBm reference sensitivity
    - Portables: 70 dB intermodulation rejection ratio; 70 dB adjacent channel rejection ratio; -116 dB, reference sensitivity