

U.S. SPECTRUM MANAGEMENT REVIEW



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PRESENTATION

- **INTRODUCTION**
- **SPECTRUM POLICY INITIATIVE**
- **SPECTRUM POLICY TASK FORCE**
- **INTERFERENCE TEMPERATURE**

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INTRODUCTION

SPECTRUM MANAGEMENT REVIEW

- **PRESIDENT BUSH'S INITIATIVE**
- **FCC SPECTRUM POLICY TASK FORCE
REPORT**

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PRESIDENT'S INITIATIVE

**COMMITMENT TO PROMOTION OF
DEVELOPMENT AND IMPLEMENTATION OF
A SPECTRUM POLICY TO:**

1. **FOSTER ECONOMIC GROWTH**
2. **ENSURE SECURITY**
3. **ADVANCE COMMUNICATIONS TECHNOLOGY
AND SERVICES**
4. **SATISFY NEEDS FOR PUBLIC SAFETY,
SCIENTIFIC RESEARCH, TRANSPORTATION,
AND LAW ENFORCEMENT**

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PRESIDENT'S INITIATIVE
IDENTIFY RECOMMENDATIONS FOR
REVISING POLICIES AND PROCEDURES
(LEGISLATION AND RECOMMENDATIONS
TO):

- **FACILITATE A MODERNIZED AND IMPROVED SPECTRUM MANAGEMENT SYSTEM**
- **CREATE INCENTIVES FOR MORE EFFICIENT USE OF THE SPECTRUM**
- **STREAMLINE DEPLOYMENT OF NEW OR EXPANDED SERVICES AND TECHNOLOGIES**
- **ADDRESS SECURITY, PUBLIC SAFETY, TRANSPORTATION AND SCIENCE**

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PRESIDENT'S INITIATIVE

SECRETARY OF COMMERCE IS TO
CONDUCT PUBLIC MEETINGS TO
ASSIST DEVELOPING
RECOMMENDATIONS FOR POLICIES
AND PROCEDURES FOR USE OF
SPECTRUM BY STATE AND LOCAL
GOVERNMENTS AND THE PRIVATE
SECTOR

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PRESIDENT'S INITIATIVE

REPORTS FROM THE SPECTRUM POLICY INITIATIVE ARE SCHEDULED TO BE PRESENTED TO THE PRESIDENT AT THE END OF MAY 2004

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SPECTRUM POLICY TASK FORCE

FCC TASK FORCE, AFTER A YEAR OF STUDY, PRESENTED (NOVEMBER 2002) FINDINGS AND THIRTY-NINE RECOMMENDATIONS TO MODERNIZE RULES TO GUIDE HOW U.S. SPECTRUM IS MANAGED AND UTILIZED FOR CIVILIAN APPLICATIONS:

- **THREE KEY FINDINGS**
- **FOUR MAJOR RECOMMENDATIONS**

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SPECTRUM POLICY TASK FORCE

KEY FINDINGS

- 1. ACCESS – MUCH MORE SPECTRUM CAN BE USED (TIME, GEOGRAPHICAL AND OVERLAY SHARING)**
- 2. TECHNOLOGY – SOFTWARE DEFINED AND COGNITIVE RADIOS**
- 3. RIGHTS AND RESPONSIBILITIES – USERS NEED MORE CERTAINTY**

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SPECTRUM POLICY TASK FORCE

RECOMMENDATION 1.

**MIGRATE TO MORE FLEXIBLE,
CONSUMER-ORIENTED POLICIES:**

- PROVIDE INCENTIVES (FLEXIBLE RULES AND SECONDARY MARKETS)**
- DEFINE SPECTRUM USERS' RIGHTS AND RESPONSIBILITIES**
- FLEXIBLE POWER LIMITS IN RURAL OR LESS CONGESTED AREAS**

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SPECTRUM POLICY TASK FORCE

RECOMMENDATION 2.

ADOPT QUANTITATIVE STANDARDS FOR INTERFERENCE (TEMPERATURE):

- **ADOPT A NEW METRIC TO QUANTIFY AND MANAGE INTERFERENCE (MAXIMUM PERMISSIBLE LEVELS OF INTERFERENCE ON A BAND-BY-BAND BASIS USING COGNITIVE RADIOS)**

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SPECTRUM POLICY TASK FORCE

RECOMMENDATION 3.

IMPROVE ACCESS THROUGH TIME SHARING, IN ADDITION TO FREQUENCY, POWER, AND SPACE

- **DYNAMIC ALLOCATION AND ASSIGNMENT OF SPECTRUM USAGE RIGHTS**

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SPECTRUM POLICY TASK FORCE

RECOMMENDATION 4.

**ADD TO THE TRADITIONAL, SINGLE
COMMAND AND CONTROL MODEL, THE
EXCLUSIVE AND COMMONS MODELS,
BALANCING THE THREE MODELS**

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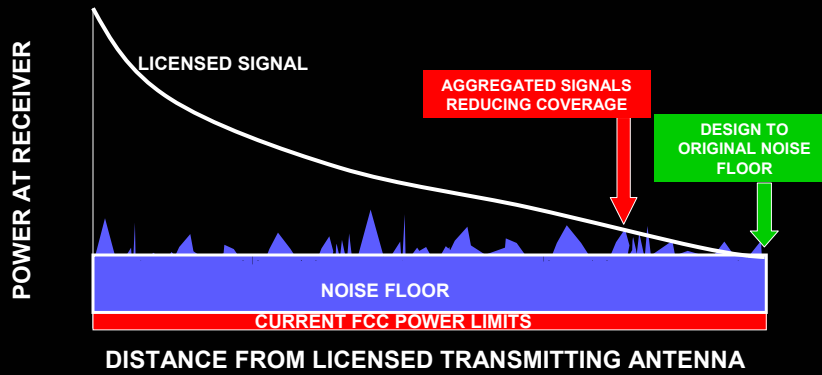
SPECTRUM POLICY TASK FORCE REPORT

**FEDERAL COMMUNICATIONS
COMMISSION, WASHINGTON, D.C.**

**USER RESOURCE LINK TO THE FULL
REPORT (69 PAGES) IS FOUND AS A
REFERENCE IN THE PAPER PUBLISHED
BY THE CONFERENCE ORGANIZERS**

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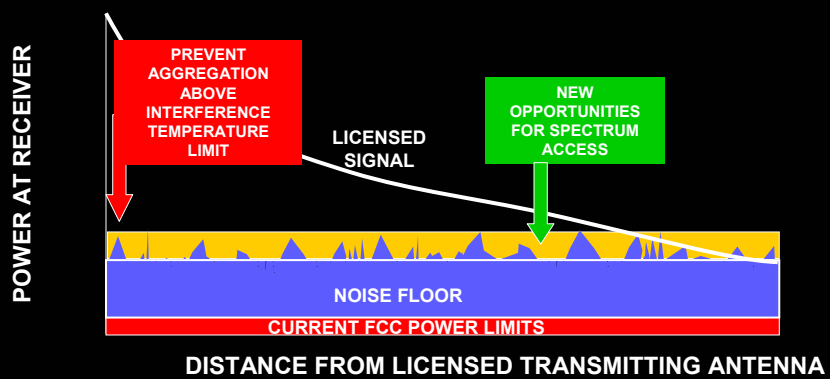
INTERFERENCE AVOIDANCE TOLERANCE OF INTERFERENCE - TODAY



LICENSE HOLDERS DESIGN SYSTEM TO OPERATE DOWN
TO THE NOISE FLOOR

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INTERFERENCE AVOIDANCE TOLERANCE OF INTERFERENCE - FUTURE



QUANTIFY ACCEPTABLE LEVELS OF INTERFERENCE
COGNITIVE RADIOS
CAN CAPTURE THE *INTERFERENCE TEMPERATURE!*