Project	IEEE P802.16 Broadband Wireless Access Working Group
Title	Standard Radio System Plan -Technical Requirements for LMCS in the band 25.35 - 28.35 GHz (Powerpoint presentation given at Boulder, CO, meeting, May 1999)
Date Submitted	22 June, 1999
Source	Douglas Sward Industry Canada 300 Slater Street Ottawa, Ontario K1A 0C8 Canada Voice: +1 613 990 4700 Fax: +1 613 952 5108 E-mail: sward.doug@ic.gc.ca
Re:	As requested at the Boulder, CO, meeting – provide copy of presentation. Specifically, this document deals with inter-system coordination process and parameters.
Abstract	This presentation provides an overview of the proposed technical standards for LMCS systems in Canada. The document addresses the Canadian frequency block arrangement, technical requirements, including maximum transmitter power, maximum effective isotropically radiated power (e.i.r.p.), maximum e.i.r.p. density, as well as inter-system coordination process and parameters.
Purpose	To assist in the determination of appropriate co-existence criteria for LMCS/LMDS systems.
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Release	The contributor acknowledges and accepts that this contribution may be made publicly available by 802.16.

Overview of draft SRSP-325.35: Standard Radio System Plan - Technical Requirements for LMCS in the band 25.35 - 28.35 GHz

Douglas Sward
Director - Terrestrial Engineering
Industry Canada

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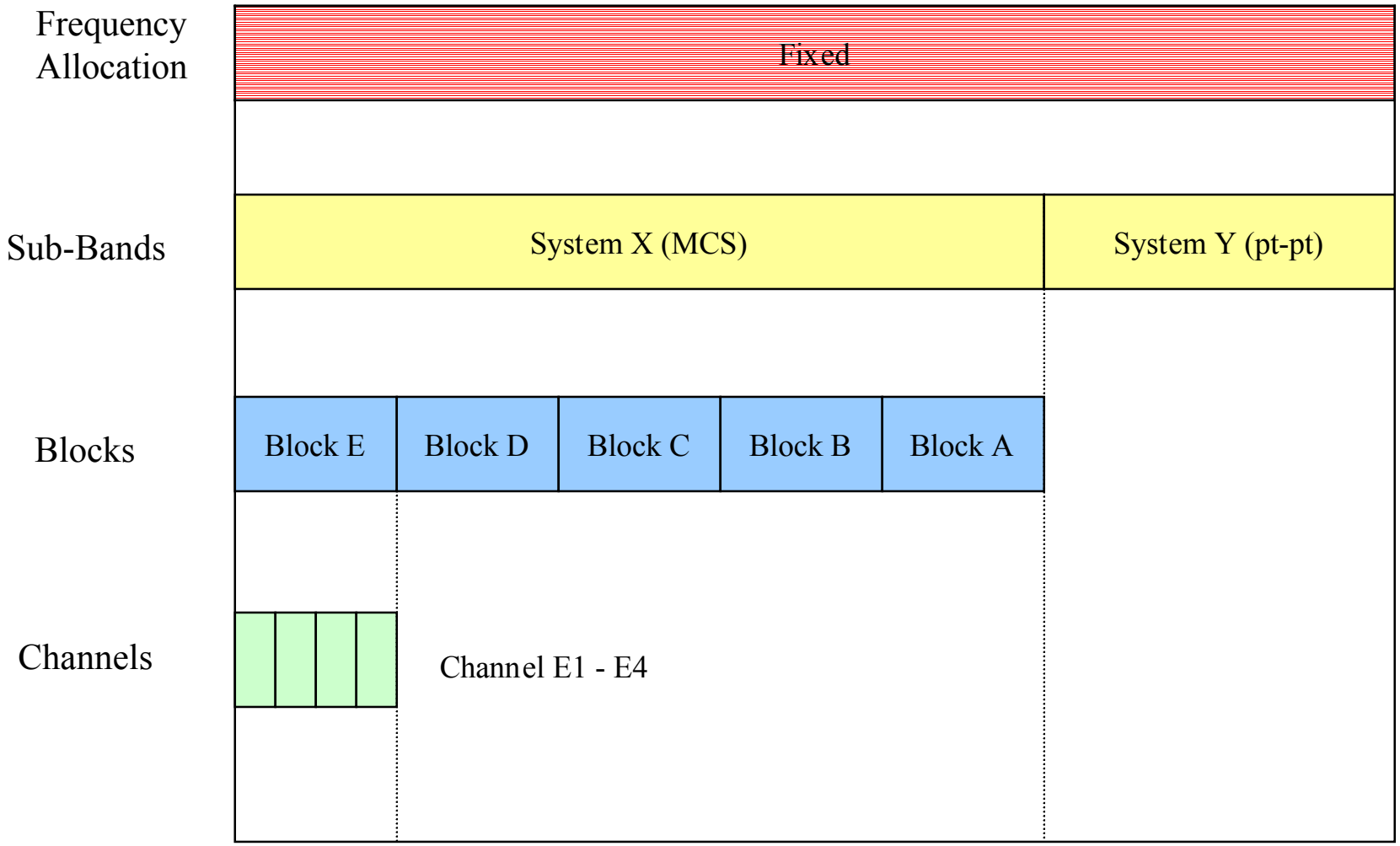
LMCS Frequency Block Arrangment

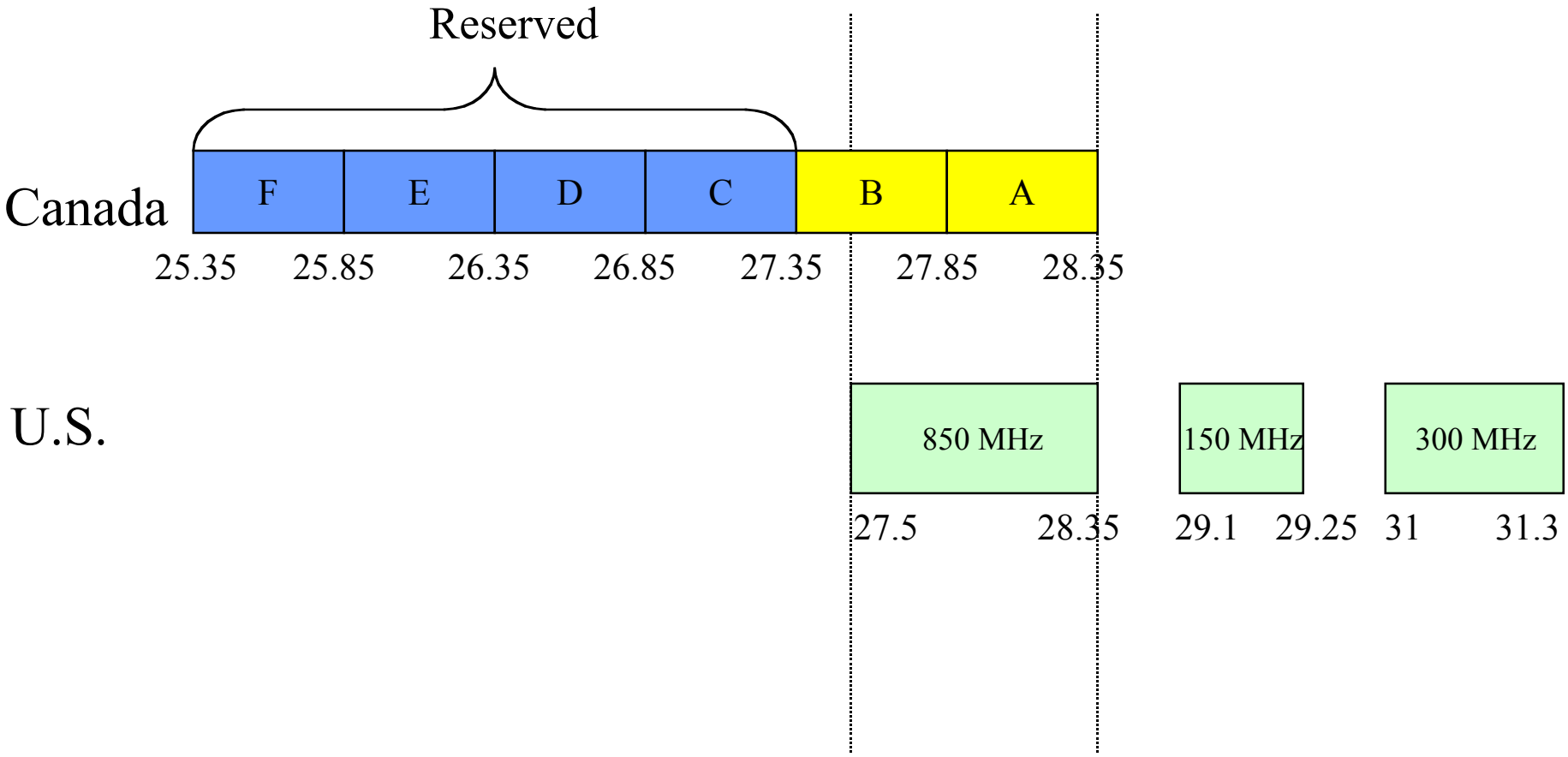
Block A	27.85 – 28.35 GHz
Block B	27.35 – 27.85 GHz
Block C	26.85 – 27.35 GHz
Block D	26.35 – 26.85 GHz
Block E	25.85 – 26.35 GHz
Block F	25.35 – 25.85 GHz

* Block C to Block F are reserved for future LMCS licensing

Frequency Management Terms



Canadian LMCS vs. U.S. LMDS Frequency Allocation



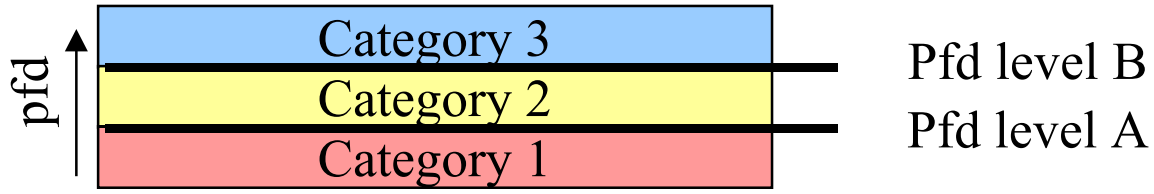
Technical Requirements

- LMCS licensees will operate both forward and return communications links within the assigned frequency block.
- Maximum EIRP of a hub/subscriber transmitter must not exceed +55 dBW.
- Transmitter power into the antenna must not exceed +10 dBW.
- EIRP density shall not exceed [X dBW/MHz].
- Equipment must comply with RSS 191.
- International and domestic technical consideration in the band 25.35 - 27.5 GHz are as specified in Appendix A of the SRSP.

Domestic Inter-System Coordination

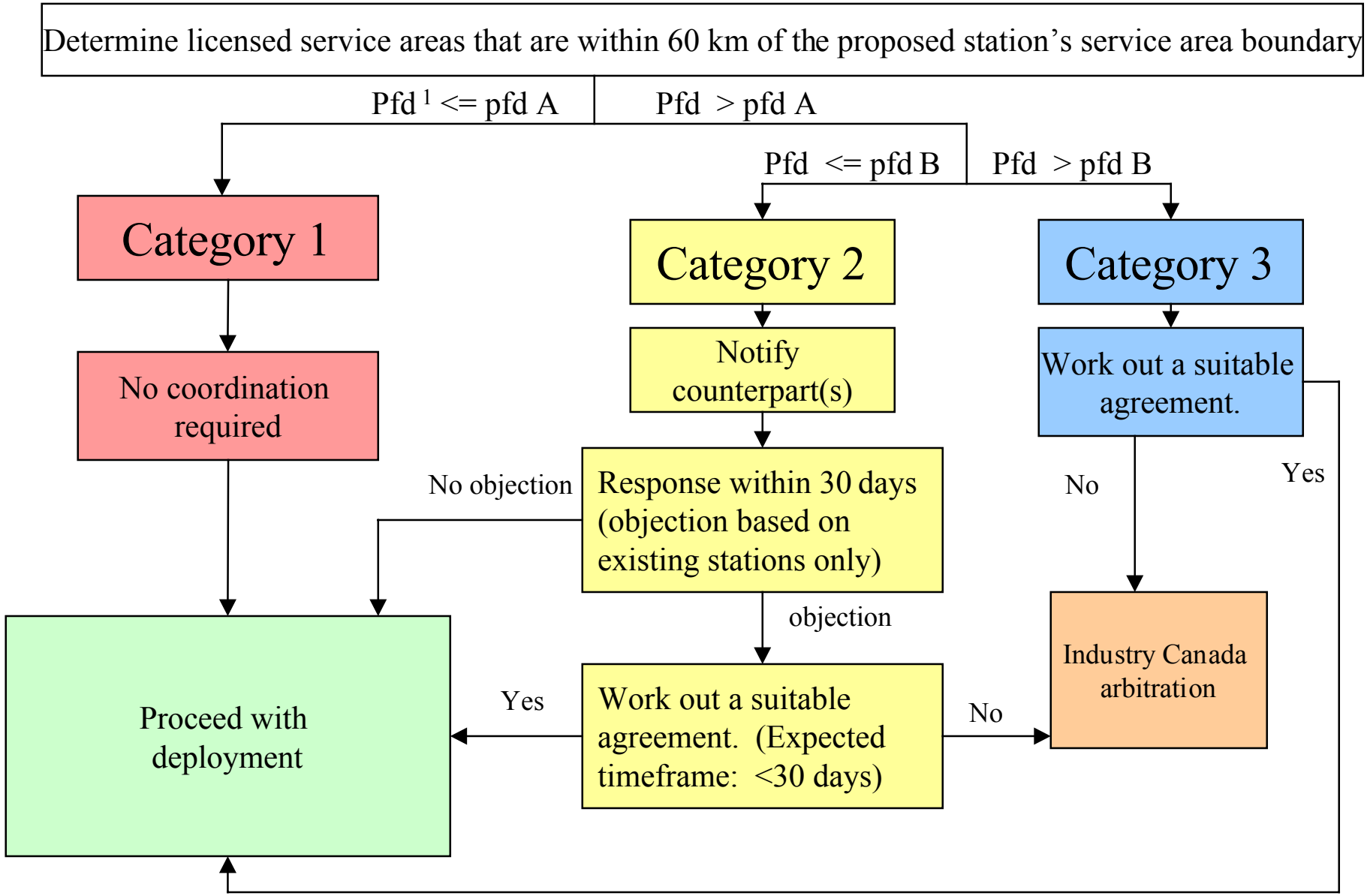
- Coordination is required for licensed service areas where the shortest distance between the respective service area boundaries is less than 60 km.
- Industry communication is encouraged. Operators are encouraged to arrive at mutually acceptable sharing agreements.
- If a sharing agreement between operators has not been concluded, a default coordination process is available.
    - A simplified procedure
    - Administered by the licensees
    - Foster rapid implementation

Dual power flux density (pfd) level Coordination Process



Category 1	Category 2	Category 3
• calculated pfd <= pfd A • based on conservative assumptions • pfd A derived using an I/N of -6 dB • no coordination requirement	• calculated pfd > pfd A, <= pfd B • this range would allow operators to use practical mitigation and siting measures to avoid any potential for interference • coordination required for existing stations only	• calculated pfd > pfd B • higher probability for interference • coordination required before deployment

* For LMCS, pfd A = -114 dBW/m^2 /MHz and pfd B = -94 dBW/m^2/MHz



Notes: 1. Pfd is calculated at the service area boundary of the affected service area.

Calculation of pfd

- pfd is to be calculated at the service area boundary of the affected service areas
- recognized engineering models, taking into account such factors as:
    - propagation loss
    - atmospheric loss
    - antenna directivity toward the service area boundary
    - curvature of Earth
- the pfd level at the service area boundary shall be the maximum value for elevation points up to 500 m above local terrain elevation.

Domestic Inter-System Coordination - Example