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July 17, 2003

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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
Room TW-B204
445 Twelfth Street, S.W.
Washington, D.C. 20554

RECEIVED

JUL 17 2003

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Re: ET Docket No. 03-102
Notice of *Ex Parte* Meeting

Dear Ms. Dortch:

Pursuant to Section 1.1206(b) of the Commission's rules, I am writing on behalf of Short Range Automotive Radio Frequency ("SARA") and Long Range Automotive Radio Frequency ("LARA"), two associations of automobile and vehicular radar manufacturers seeking to deploy collision warning, collision mitigation and active safety systems on automobiles in the United States, to notify you of an *ex parte* meeting that occurred on July 16, 2003, with the following Commission staff in connection with the above-referenced proceeding:

Julius Knapp, Deputy Chief, Office of Engineering and Technology ("OET")
Jim Schlichting, Deputy Chief, OET
Alan Scrime, Chief, Policy & Rules Division, OET
Karen Rackley, Chief, Technical Rules Branch, OET
Tom Derenge, Chief, Spectrum Policy Branch, OET
Ron Chase, Electrical Engineer, OET
Hugh Van Tuyl, Electrical Engineer, OET
Neal McNeil, Electrical Engineer, OET

Non-Commission participants included:

Volker Schmid, DaimlerChrysler
Peter Glocker, A.D.C.
Dan Selke, Mercedes-Benz U.S.A.
Ari Fitzgerald, Hogan & Hartson
David Martin, Hogan & Hartson

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Enclosed is a copy of the slide presentations that were made at the meeting.

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An original and one copy of this letter are submitted for inclusion in the proceeding record

Respectfully submitted,

Ari Q Fitzgerald
Counsel for SARA and LARA

AQF/pn
Enclosures
cc Julius Knapp
Jim Schlichting
Alan Scrime
Karen Rackley
Tom Derenge
Ron Chase
Hugh Van Tuyl
Neal McNeil
Volker Schmid
Peter Glocker
Dan Selke
David Martin

SARA - Mission

Global Harmonization for Automotive Ultra Wide Band Short Range Radar

for

Enhancement of Road Safety

DAIMLERCHRYSLER

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Automotive Short Range Radar

SARA

Short range Automotive Radar frequency Allocation

SARA MEMBERS 1)

DaimlerChrysler, BMW, Fiat, VW, Jaguar, PSA Peugeot Citroen, Renault, Saab, Audi, Ford, Volvo, Opel, MAN, Skoda, Seat, Continental Temic, Tyco Electronics M/A-COM, Bosch, Raytheon, Denso, Siemens VDO Automotive, Autoliv, CEL, sms GmbH smart microwave sensors, Delphi, TDK, Autocruise, InnoSenT, TRW, Visteon, Hella

1) SARA = Short range Automotive Radar frequency Allocation founded in 3/2001

Audi, BMW, DaimlerChrysler, Fiat, Ford, Jaguar, Opel / GM, Porsche, PSA Peugeot Citroën, Renault, Saab, Seat, Volkswagen, Volvo, MAN, Autocruise, Autoliv, Bosch, CEL, Continental Temic, Delphi, Denso, InnoSent, Megamos, Siemens VDO, s.m.s., TDK, TRW, Tyco Electronics, ValeoRaytheonSystems, Visteon.

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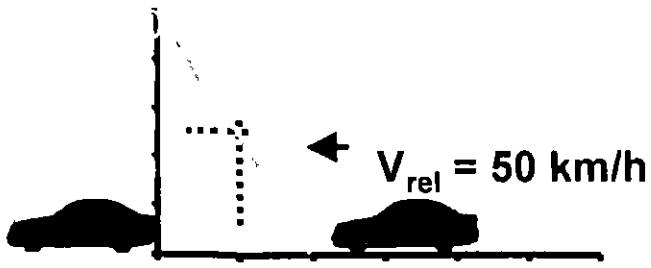
Safety benefits of radar sensors

Active and passive safety both benefit from same surround sensing technology (24 GHz Short Range Radar)

Early Warning provided by 24 GHz - sensors

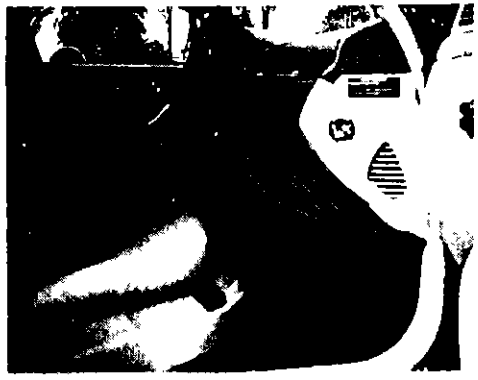
Braking 0.5s earlier reduces crash energy by 50% (city)

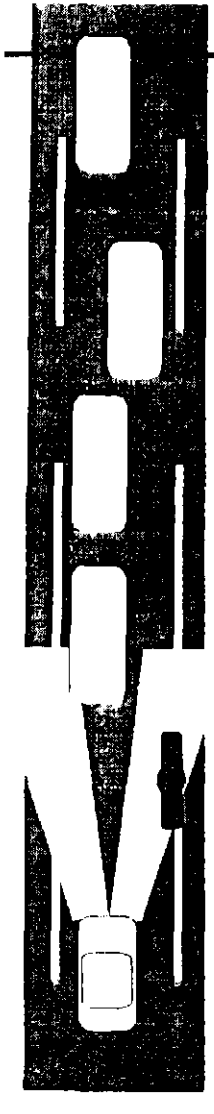
kinetical energy at time of impact [%]



Distance at beginning of emergency braking [m]

New interior protection devices enabled





ACC / enhanced by SRR

Long Range (ACC): 77 GHz-Radar

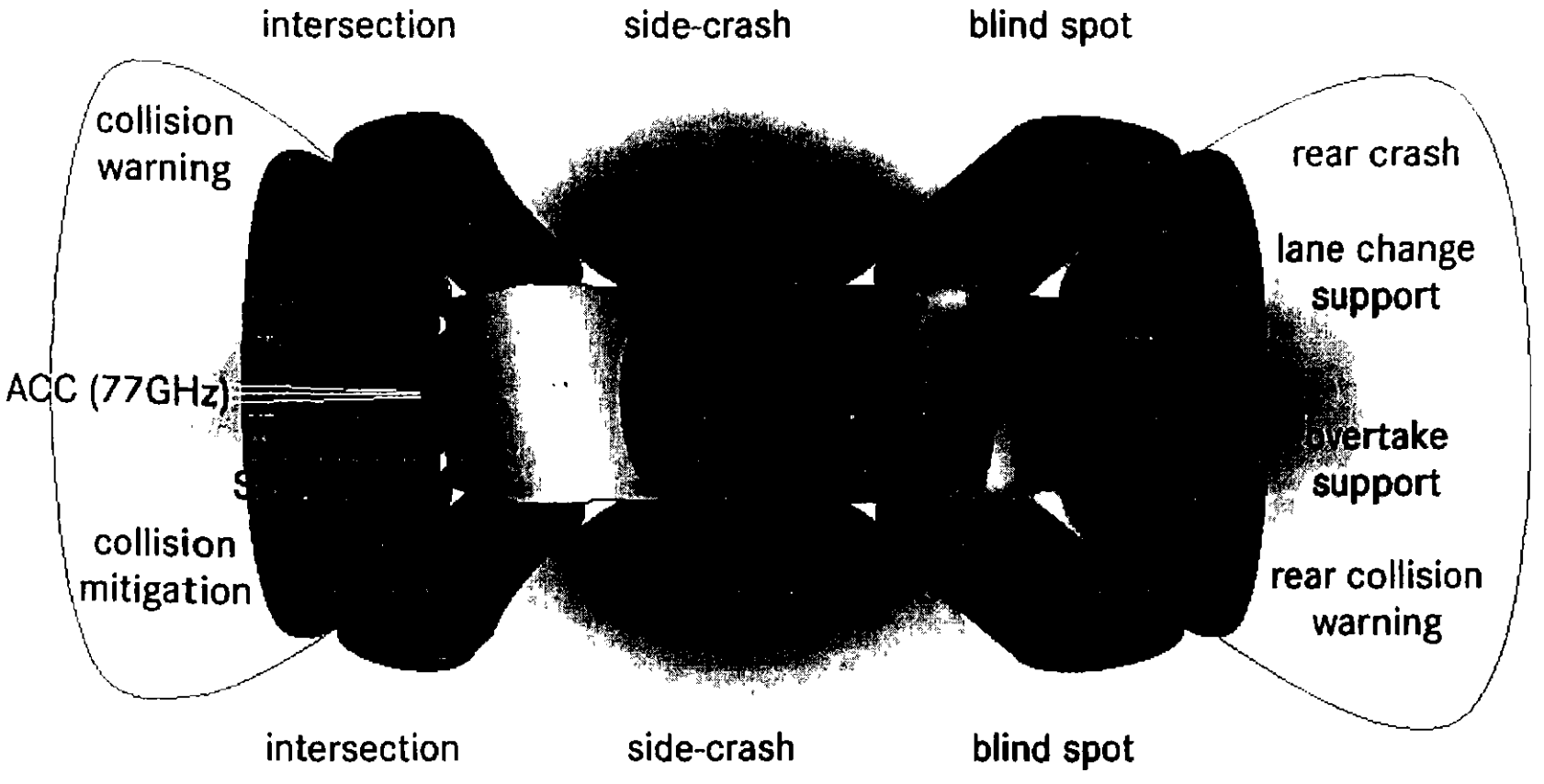
- Range: 2 – 120 m
- Resolution: 100 cm ⇨ bandwidth 0.5 GHz
- Multi target capability, weather robustness

Short Range (SRR): 24 GHz-Radar

- Range: 0.3 - 20 m
- Resolution: 3 cm ⇨ bandwidth 5 GHz
- Reliable, complete coverage of vehicles front area

Automotive Short Range Radar

SARA
Short Range Automotive Radar Frequency Allocation



Audi, BMW, DaimlerChrysler, Fiat, Ford, Jaguar, Opel / GM, Porsche, PSA Peugeot Citroën, Renault, Saab, Seat, Volkswagen, Volvo, MAN, Autocruise, Autoliv, Bosch, CEL, Continental Temic, Delphi, Denso, InnoSent, Megamos, Siemens VDO, s.m.s., TDK, TRW, Tyco Electronics, ValeoRaytheonSystems, Visteon.

Regulatory Issues

- Adoption of rules in the USA released April 2002
- Ongoing work in Europe through the CEPT/ECC
- Identification of the Regulatory Package solution

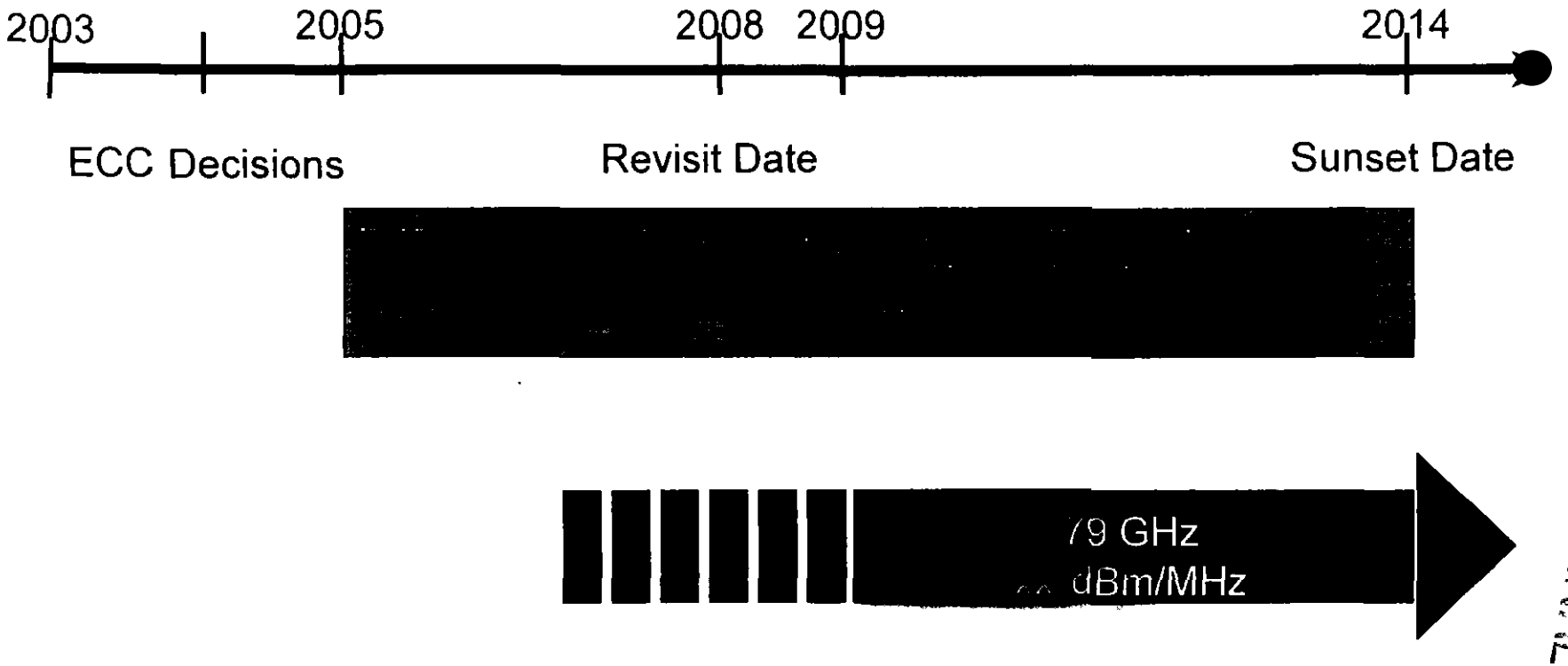
1. Goal of the European Regulatory Process: a "**package solution**" in Europe:

- Technical review through the CEPT/ECC process
- EC action through the Radio Spectrum Committee
- ETSI Standards for UWB SRR technology
- CEPT/ECC Decisions
  - 24 GHz as a temporary home (until 2014)
  - 77 to 81 GHz band as a long-term home for SRR

Automotive Short Range Radar

SARA

Short range Automotive Radar frequency Allocation



Package Solution (Proposal discussed in ECC's SRD MG)

Audi, BMW, DaimlerChrysler, Fiat, Ford, Jaguar, Opel / GM, Porsche, PSA Peugeot Citroën, Renault, Saab, Seat, Volkswagen, Volvo, MAN, Autocruise, Autoliv, Bosch, CEL, Continental Temic, Delphi, Denso, InnoSent, Megamos, Siemens VDO, s.m.s., TDK, TRW, Tyco Electronics, ValeoRaytheonSystems, Wabco.

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2. **Compatibility:** ECC Report 23 (May 2003) from Working Group on Spectrum Engineering

- SRR is compatible based on aggregate penetration of SRR-equipped vehicles expected in Europe by 2014

- Protection of passive use: Non-conforming operations that do not cause harmful interference are permitted as a matter of national sovereignty under ITU RR 4.4

3. **Policy Basis for SRR:** a key technology for future active automobile safety applications:

- EC "eSafety" (traffic safety) program -- SRR as a priority item
- European Community mandate for member states through the Radio Spectrum Committee
- This mandate could lead to Community legislation making spectrum availability and harmonisation for SRR mandatory in the EU

4. Regulatory Timetable for Europe:

- The ECC SRD MG is expected to propose a 77 GHz decision in September 2003 for ECC approval in 1.Q. 2004
- The ECC would present a draft 24 GHz SRR decision to the December 2003 meeting of the Radio Spectrum Committee of the European Commission
- The European Commission timetable contemplates a final ECC decision by July 2004

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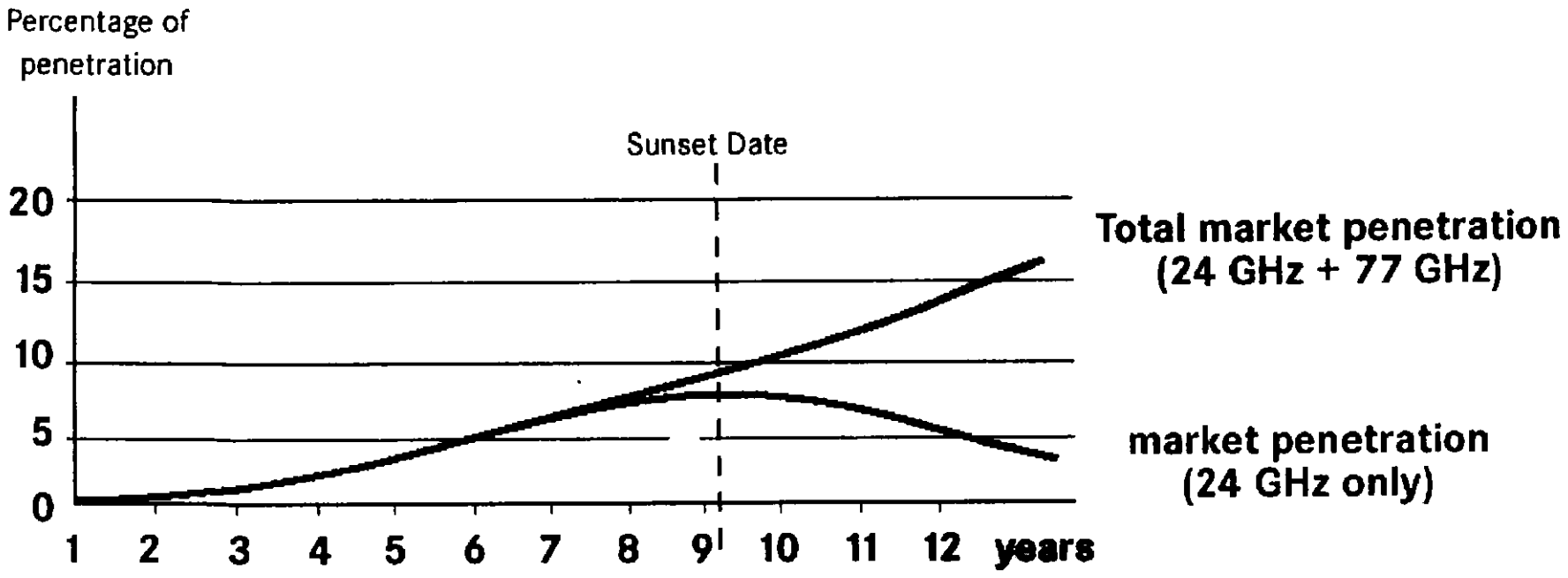
Automotive Short Range Radar

SARA
Short range Automotive Radar frequency Allocation



Transition to 77 GHz at start of new model or face lift helps to limit 24 GHz below 10%

Audi, BMW, DaimlerChrysler, Fiat, Ford, Jaguar, Opel / GM, Porsche, PSA Peugeot Citroën, Renault, Saab, Seat, Volkswagen, Volvo, MAN, Autocruise, Autoliv, Bosch, CEL, Continental Temic, Delphi, Denso, InnoSent, Megamos, Siemens VDO, s.m.s., TDK, TRW, Tyco Electronics, ValeoRaytheonSystems, Visteon.

European Commission Mandate in Radio Spectrum Committee

1. Harmonised long term frequency allocation 77- 81 GHz designated for SRR
2. Interim frequency range around 24 GHz for SRR in the EU
3. Reference date for harmonised withdrawal of 24 GHz designation:
   - no new SRR systems can be sold after this date
   - SRR systems sold before can be operated until the end of their lifetime
4. *Collective commitment by the Automotive Industry*
5. Statement by EU Commission: Acceptance of Harmonised SRR standard at 24 GHz requires clear date and transition conditions to 77 GHz
6. Legal safeguard for member states to limit deployment in case of problems
7. *Revisiting of penetration trends and interference situation.*

Audi, BMW, DaimlerChrysler, Fiat, Ford, Jaguar, Opel / GM, Porsche, PSA Peugeot Citroën, Renault, Saab, Seat, Volkswagen, Volvo, MAN, Autocruise, Autoliv, Bosch, CEL, Continental Temic, Delphi, Denso, InnoSent, Megamos, Siemens VDO, s.m.s., TDK, TRW, Tyco Electronics, ValeoRaytheonSystems, Watson.

Worldwide regulatory solution for SRR is essential for traffic safety

SARA respectfully asks :

- → **Consider Short Range Radar an enabler for traffic safety applications**
- → **Need support for US frequency regulation for ACC and SRR (FCC)**
- → **Need public support for SRR technology (worldwide allocation process)**

SARA is ready to closely cooperate