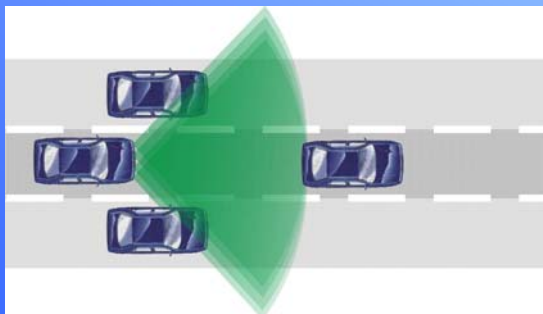


Possible regulation for UWB and Short Range Radars



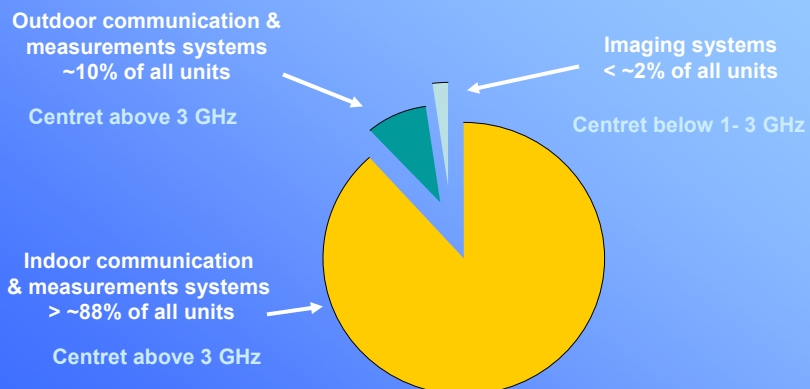
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Main UWB application types 1-10 GHz



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Possible regulation

- Generic communications equipment indoor and outdoor
 - Short Range Device regulation.
 - Annex to ERC REC 70-03
 - Generic harmonised standard - end 2004

- Imaging systems including ground penetration systems
 - Dedicated separate regulations.
 - ECC Recommendation or Decision
 - Separate harmonised standard - end 2004



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e-Safety initiative and SRR

- EC communication (COM(2003) 542)
 - 1.300.000 accidents per year in Europe
 - 40.000 fatalities and 1.700.000 injuries
 - 160 Billion € ~ 2% of the GDP in Europe

- Should be reduced with 50% before 2010

- **“Removal of regulatory barriers for a time limited use of 24 GHz spectrum for SRR”**

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Mandate to CEPT on SRR

- Issued 5th August 2003
- Identify harmonised radio spectrum for SRR
 - Identify a permanent band
 - Viability of a time-limited introduction in 24 GHz
 - Consider ITU footnote 5.340
 - Threshold market penetration for 24 GHz equipment
 - Protect in particular EESS and FS
- First report October 2003
- Final report-adopted ECC Decisions – July 2004

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SRD/MG response to the Mandate

A 'package solution'

- A permanent frequency band – 79 GHz
- A temporary solution in 24 GHz
 - Definition of a reference date (2014)
 - Legal certainty of 'stop placing on the market'
 - Monitoring process of market access
 - Review process with all parties involved
- Legal certainty of all elements of 'package'

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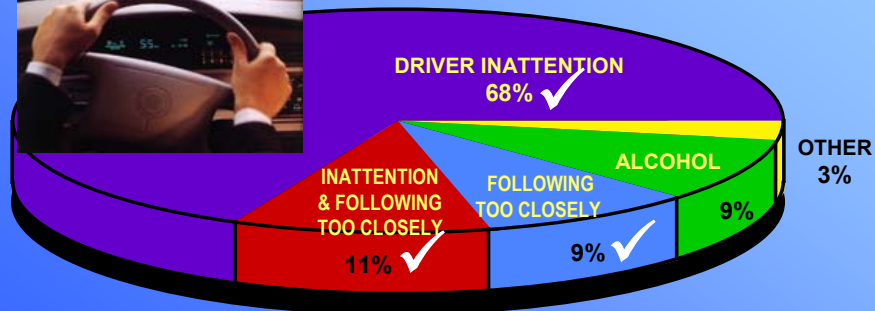
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What is the usefulness' of Short Range Radar



→ SRR Automotive Radar could address 88% of all causes of Rear-End Crashes



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Frequency designation in 79 GHz

Draft ECC Decision for public consultation

- Based on System Reference document from ETSI
- Frequency band 77-81 GHz to be used
- Compatibility studies successful – however
 - Amateur service in 75.5-76 GHz beyond 2006 RR 5.559A
- Spectrum available from January 2005
- Legal certainty for implementation across Europe (EU member states)
- Class 1 equipment

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The 24 GHz band (21.5-26.5 GHz)

- Components for 79 GHz SRR not yet available
- Long Range Radar systems in 76 GHz available
- Early introduction of SRR in 24 GHz
- A number of other services in the band
- Compatibility studies
 - Fixed Service
 - EESS
 - Radio Astronomy Service
 - Possibility if country penetration below [10%]

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Reference date

- Envisaged national car parc penetration
- Protection of other services – below 10%
- Industry requirement for SRR equipment in a line of production
- A firm date to be decided
- After this date no new 24 GHz equipment to be placed on the market – only 79 GHz

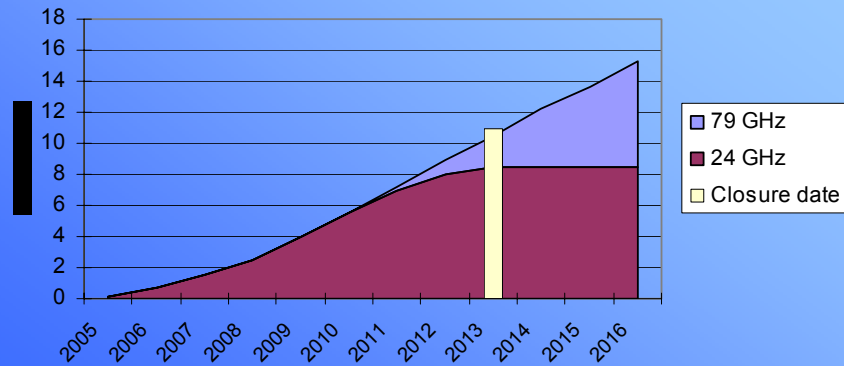
Up to 9 years ~ 2014

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Transition arrangement



Possible penetration figures and closure date for 24 GHz

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Reporting Arrangement

- ACEA MoU to formalise commitments
 - To comply with reporting requirements
 - To limit 24 GHz SRR sales to 10% of total car parc
 - To report on SRR-equipment vehicles
 - To comply with other elements of the regulatory package on the use of 24 GHz
- First 2 years number of SRR cars for EU market
- 2007-2014 number of SRR for each EU member
- Extend the process to manufacturers outside EU

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Possible temporary solution

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
79 GHz [77-81] available @ -9 dBm/MHz Frequency availability – placing on market and use											
24 GHz ± 2.5 GHz @ - 41.3 dBm/MHz Placing on the market in Europe											
24 GHz ± 2.5 GHz @ - 41.3 dBm/MHz Use of spectrum for existing SRR											
Attenuation for 23.6-24 GHz 30° above horizontal plane	25 dB					30 dB				35 dB	
Ongoing reporting by Automotive manufacturers											

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Radio Astronomy



- SRR not compatible with Radio Astronomy
- 12 RA sites using 24 GHz in 6 countries
- Automatic deactivation of SRR system – GPS
 - Definition of protection range (line of sight)
- General user control manual or automatic if 24 GHz is not implemented in all countries

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Review Process

- To ensure applicability of temporary band
- Radio Spectrum Committee to arrange
 - By 2009 or when 5% penetration is reached in EU
- Closure date of placing on the market to be brought forward if penetration exceeds expectations
- No change of 'package solution' as such

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Regulatory and legal certainty

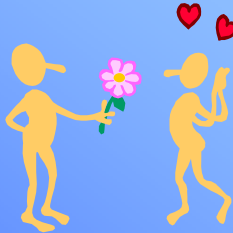
- Stop placing on the market – R&TTE Directive
- Avoid after market sales
- Availability of 79 GHz band within EU
- Availability of 24 GHz for a temporary solution
- Reporting arrangement including imported cars
- Harmonised standard for 24 GHz and 79 GHz
- No safety of life conditions in accordance with Radio Regulations

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Thank you
For your attention



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