



eVADER

Workshop
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EBU's Work
on Silent Vehicles and VI Pedestrians

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Who we are

The European Blind Union (EBU):

- represents the interests of blind and partially sighted people in 45 European countries
- is specially committed to the full inclusion of blind and partially sighted people
- EBU Road Safety Commission works on silent vehicles and other issues
- EBU Liaising Commission works with EU institutions on the noise file and other legislative issues

Contents



Main issues to be looked at:

- What is the problem?
- Travelling independently as a blind person
- Requirements for an Acoustic Vehicle Alert System (AVAS)
- The noise file: Legislative work on silent cars
- Conclusions



The Problem: environmental concerns vs safety needs

Silents cars...

- Good news: silents cars have many benefits:
 - health
 - reduced emissions
 - improved fuel economy
- Bad news: endanger safety of people with sight loss

Access is a human right



- enshrined in the Convention on the Rights of People with Disabilities (CRDP, adopted 2007)
- ratified by many UN member states including the European Union
- State Parties responsible must ensure people with disabilities have the same rights as their nondisabled in areas such as health, employment, physical environment
- Blind and partially sighted people want to be included on an « equal basis with others »

Travelling independently



- is based on decisions:
 - right time to cross?
 - street geometry?
 - type of intersection?
- Blind people rely heavily on hearing:
 - listening to traffic flow
 - identifying gaps



Picture: Blind woman with long cane crossing a street

Orientation and mobility



O&M training:

- is delivered by specialists
- fills in gaps of knowledge resulting from sight loss
- Provides safe travel techniques
- important travel technique: identifying movements and speeds of cars by hearing



Picture: Blind young man on a zebra crossing

Silent Dangers

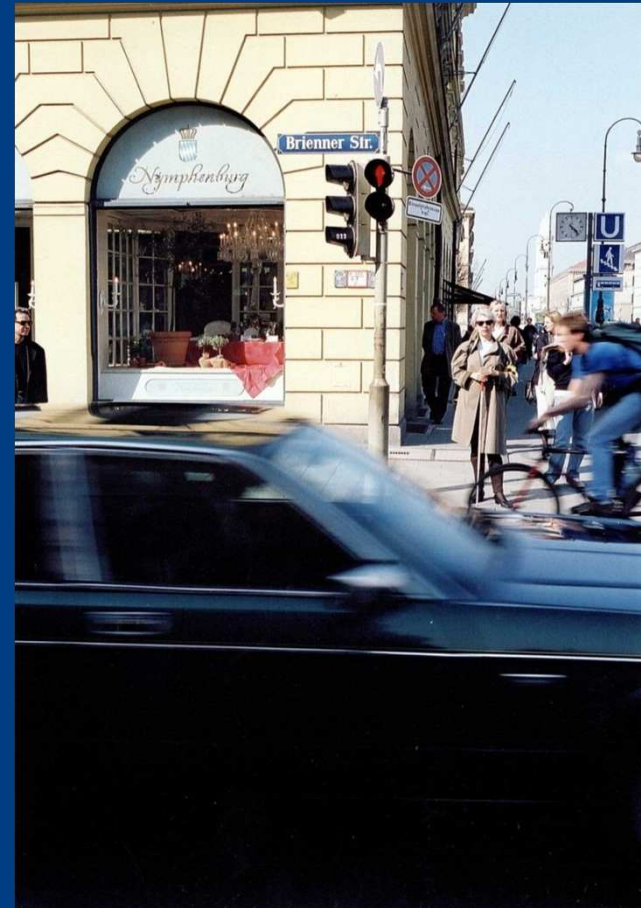


Research shows:

- silent cars too quiet to detect
- crash rate twice compared with ICE equipped cars
- greatest dangers created by low-speed movements of cars
- blind people in the most precarious group of road users

Prognosis:

Dangers likely to increase due to mix of vehicles



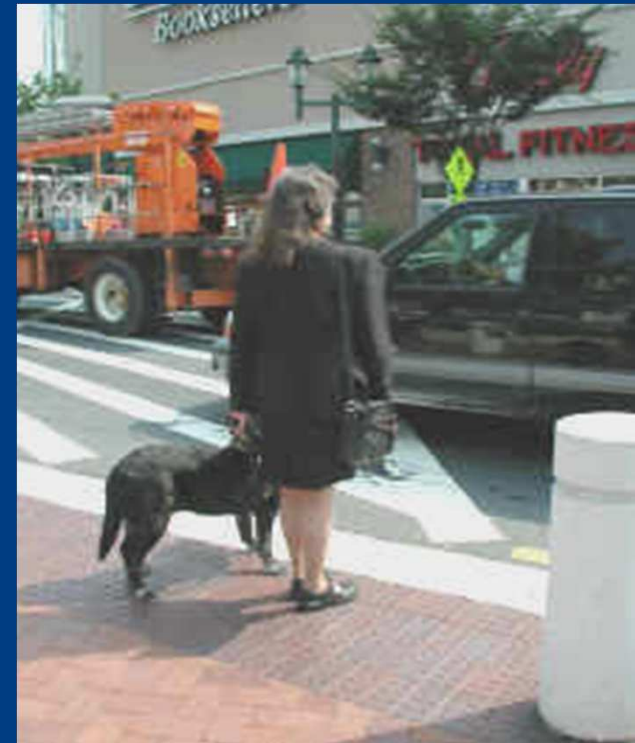
Picture: Blind woman at red light without APS

At-risk scenarios: Beware of Roundabouts 1

Curvilinear layout is a big challenge for blind pedestrians:

- difficult to get information about location and direction of crosswalk

not easy to maintain a straight line (« body alignment ») and avoid running into traffic



Picture: Blind woman with a guide dog at a roundabout

At-risk scenarios: Beware of roundabouts 2

- No clear auditory clues
 - **Exit legs:** Will vehicle exit or continue to circulate ?
 - **Entry legs:** Will driver yield?
- Circulating vehicles make it difficult to assess when crossing is appropriate
- Masking effects



Picture: Driver fails to yield blind pedestrian using crosswalk

Mandatory installation of AVAS



Just putting on sound is not enough

Blind pedestrian must know if the car is:

- ➔ speeding up/slowing down
- ➔ travelling from right to left or vice versa
- ➔ reversing
- ➔ type and size of vehicle
- ➔ idling e.g. at a red light



Picture: Blind pedestrian with long cane standing at kerb next to an idling car



Legislative action: Sound level of motor vehicles

EU legislation underway addressing audibility of silent cars

Main goals:

- to reduce sound level of motor vehicles
- To establish a new test method for measuring the noise of motor vehicles
- To draft a proposal for electric and hybrid cars which are too silent to be detected by blind people
- AVAS requirement contained in Annex IX

Call to action



- EBU has worked with the EU institutions to ensure a text which provides a maximum of road safety for people with sight loss
- EBU position on AVAS:
 - ➔ Mandatory installation
 - ➔ Active sound up to up to 40km/ph
 - ➔ no on/off switch (« pause switch »)
 - ➔ easy and clear indication of vehicle's movements



Results and assessment

- **1st reading in EU Parliament (6 February 2013)**
 - AVAS to become mandatory
 - no transitional periods
 - pause switch voluntary
- **Council's position (finalised 22 June 2013)**
 - AVAS to become mandatory within 4 to 6 years
 - pause switch mandatory
- **Trilogue (closed 5 November 2013)**
 - three-party negotiations behind closed doors
 - rationale: adoption of regulation before European elections
 - compromise text adopted; not published yet

Conclusions



Blind and partially sighted people:

- welcome the many benefits of silent vehicles
- Are concerned because silent vehicles pose a threat to their independent mobility
- Have a human right to be out in the streets. All legislative work should implement this right enshrined in the CRPD
- Silent vehicles endanger the full enjoyment of this human right
- EBU trusts that a solution can be found which takes the EBU requirements fully into account.



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Thank you