

Safe Fixation

Nomadic Device Forum progress report
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Theo Kamalski TomTom International BV



Status quo

- Work on safe fixation is in its final stage
- Final report is near to completion
- Recommendations
 - safe fixation: completed
 - general: first indication; in progress
- This intermediate report addresses
 - safe fixation part
 - best case roadmap (incl. HMI)



Navigation Market Development

The navigation sales in Europe showed a growth from 1.755 million sets in 2003 to 18.708 million sets in 2008. This is an increase of 1,066%.

A split per navigation product type is given in the table below^[1].

Fixed Systems

	2003	2008	2013
OEM sales	1,175	2,244	3,968
After Market sales	395	384	356
Total Fixed Systems sales	1,570	2,628	4,324

PND

OEM PND sales		592	1,003
After Market PND sales	185	15,488	11,107
Total PND sales	185	16,080	12,110

in thousands

[1] Source : iSupply Corporation. In the following other sources will also be quoted showing slightly different numbers. Unfortunately some statistics refer to Europe 15, Europe 15 + EFTA, others to Western Europe, etc. without giving the necessary details.



Potential solutions considered

1. Mounting instructions in the **user manual** of the **PND**
2. Mounting instructions in the **user manual** of the **car**
3. Look-up **database** with car model specific mounting instructions for the users
4. Proprietary **OEM mounting facilities** for PND
5. Standardized electro-mechanical interface **NaviFix**



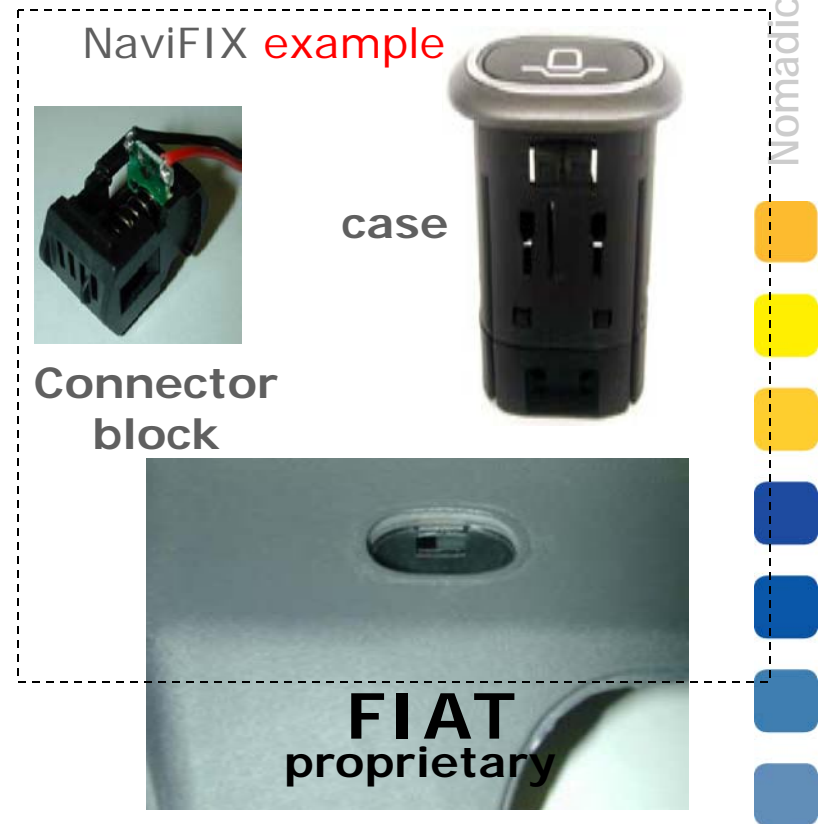
NaviFIX

Explanatory example

PND
dependent
→



- Standardized electro-mechanical mounting facility for PNDs with standardized:
 - Case
 - Connector block
- Car maker defines most suitable place
- Business model car maker:
Rol by selling case and connector block

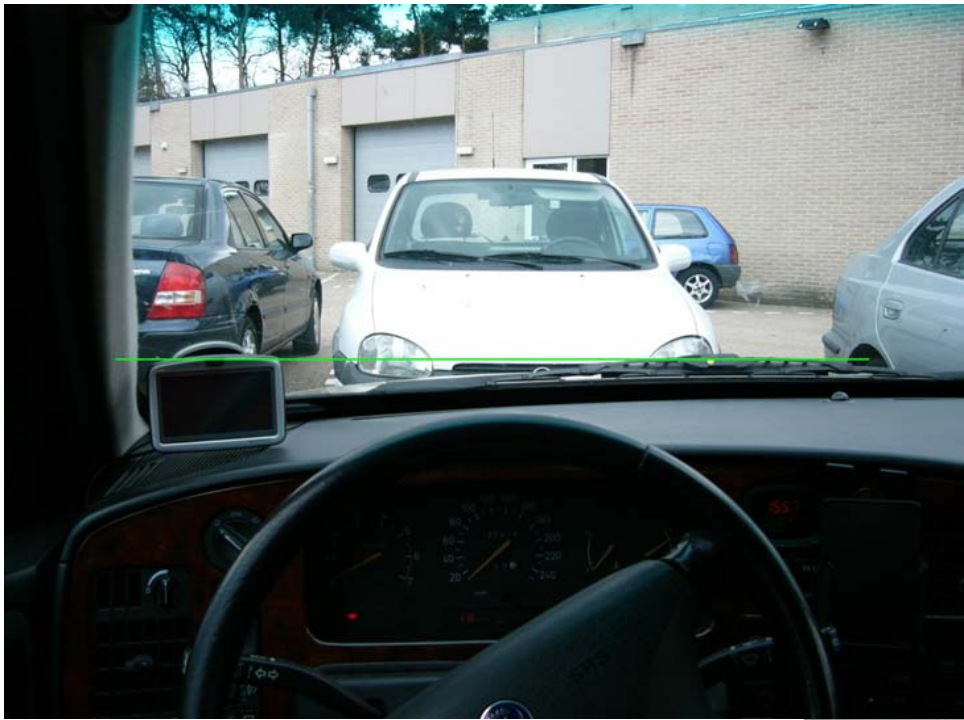


Cross-examine criteria

- Field of View
- Airbag areas
- Specific versus generic solutions
- User influence
- Additional effects



TNO – DV3 2006 M048 dated June 27, 2006.



Passenger car



Small VAN & MPV



Safe Fixation criteria chard (best guess)

	Field of View	Airbags	Car Specific	User Influence	Additional benefits	Safety Impact Ranking	
						Short term	Long term
User Manual PND	>85%	>85%	no	large		1	4
User Manual Car	100%	100%	yes	large		2	2
Look-up table	95%	100%	yes	large		4	3
Proprietary car solution	100%	100%	yes	small ^{*1}	Cables ?	3	5
Navifix	100%	100%	yes	small ^{*1}	No cables	5	1

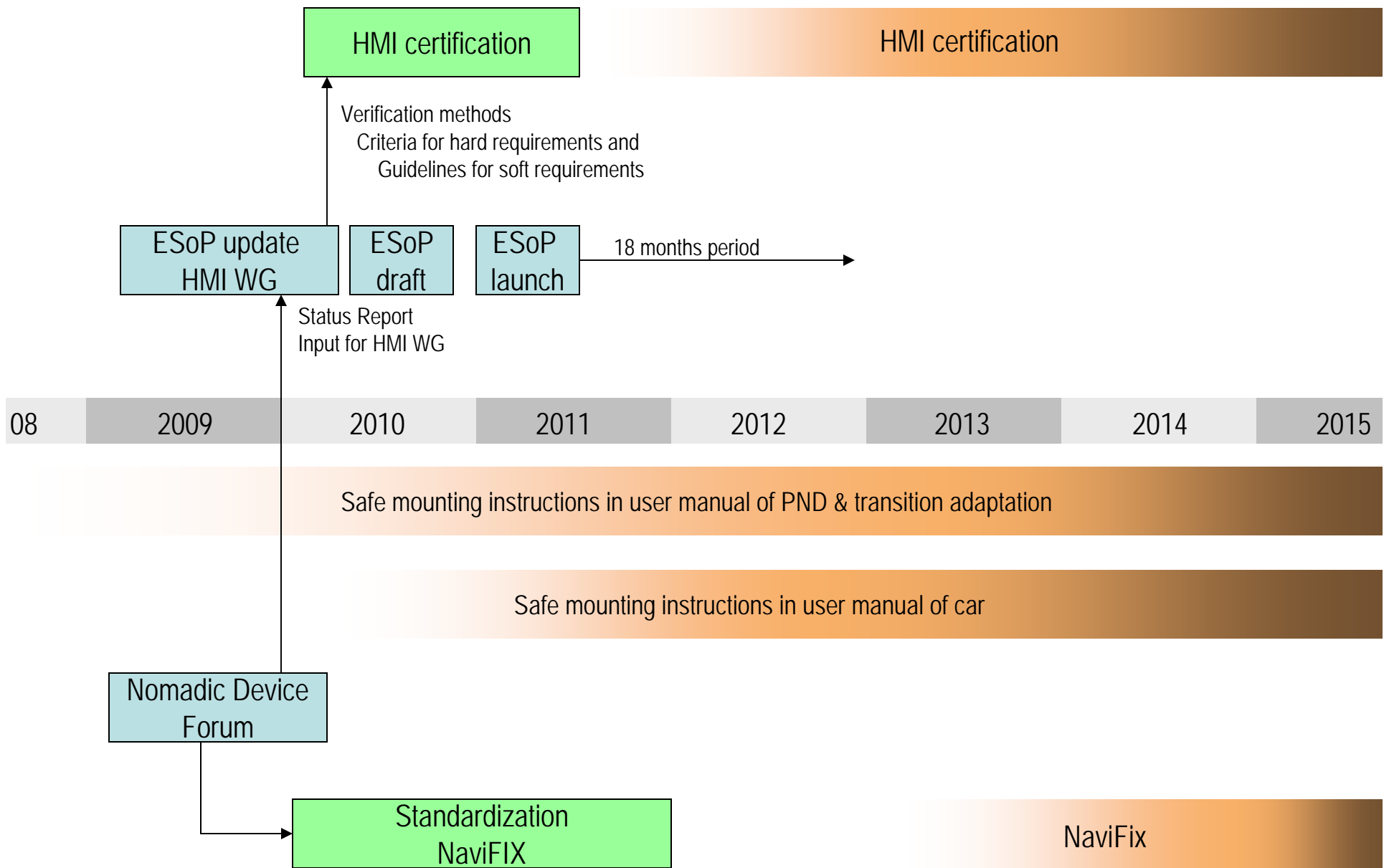
*1 Remaining user influence is size of device.



Recommendations

- Standardized solution preventing all potential hazards for the future.
→ **NaviFix**.
It takes time to develop and implement NaviFix in cars and in PNDs.
- Prevent **airbag collision**
→ Car model specific mounting instructions in user manual of the car
- Generic mounting instructions in the user manual of the PND are still needed to bridge the period with 2.
- Adapt mounting instruction in user manuals of PNDs
→ Referring to user manual of the car for a smooth transition
→ If not available instructions of PND manual apply





Thank you for your attention

Questions?

