

# Volvo's Automatic Brake System

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**Abstract—To be written.**

## VI. SUMMARY

### I. INTRODUCTION

### II. DESCRIPTION OF THE SYSTEM

- Mobileye <http://www.mobileye.com/about/industry-firsts/>
- Delphi <https://www.delphi.com/media-old/pressreleases-old/2014/10/02/delphi-first-to-market-with-integrated-radar-and-camera-system-on-volvo-cars>
- No open source components
- Ground truth, inhouse data, move to neural networks -> user data (big data).
- 2017 moved ADAS to new joint venture Zenuity w/ autoliv. <https://www.media.volvocars.com/global/en-gb/media/pressreleases/202044/volvo-cars-and-autoliv-announce-the-launch-of-zenuity>

### III. BUSINESS ASPECTS

- Value proposition, as a differentiation <2014, now commodity.
- Lines up with business strategy to provide the most reliable and best safety features, part of intellisafe.
- Strengthens brand
- Zenuity (see article p. 47)
- Lines up with goal to be seen as part of the premium segment.

### IV. ETHICAL ASPECTS

- Data collection.
- incorrect brake.
- missed brake.

City Safety should not be used to alter the way in which the driver operates the vehicle. The driver should never rely solely on this system to safely stop the vehicle.

### V. LEGAL ASPECTS

- Data collection.
- incorrect brake.
- missed brake.

## REFERENCES

- [1] G. Eason, B. Noble, and I. N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," *Phil. Trans. Roy. Soc. London*, vol. A247, pp. 529–551, April 1955.
- [2] J. Clerk Maxwell, *A Treatise on Electricity and Magnetism*, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.
- [3] I. S. Jacobs and C. P. Bean, "Fine particles, thin films and exchange anisotropy," in *Magnetism*, vol. III, G. T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271–350.
- [4] K. Elissa, "Title of paper if known," unpublished.
- [5] R. Nicole, "Title of paper with only first word capitalized," *J. Name Stand. Abbrev.*, in press.
- [6] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interface," *IEEE Transl. J. Magn. Japan*, vol. 2, pp. 740–741, August 1987 [Digests 9th Annual Conf. Magnetism Japan, p. 301, 1982].
- [7] M. Young, *The Technical Writer's Handbook*. Mill Valley, CA: University Science, 1989.

APPENDIX  
CONTRIBUTION STATEMENT