

# **Study on the Impact of the MoU on Harmonisation of Chargers for Mobile Telephones and to Assess Possible Future Options**

## Summary of Findings and Conclusions



# Study Objectives

- Study objectives:
  - Part I: Assessment of impacts of the MoU on markets for mobile phones and chargers
  - Part II: Assessment of indirect impacts of the MoU on other portable electronic devices
  - Part III: Assessment of policy options for further harmonisation
- Scope of the study: mobile phones (smartphones and feature phones), tablets, e-book readers, laptops, digital cameras & camcorders, portable media players, sports & activity monitors, personal navigation devices, portable handheld games consoles, and personal care products

# Part I – Market Overview (Handsets)

- European handset market fluctuated between 2009 and 2013 (high: 239 million units in 2009, low: 206 million units in 2012)
- European market share of data-enabled phones increased significantly (estimated at 90% of the EU market in 2013), this is expected to continue increasing
- Decreasing European Average Selling Price (ASP) of smartphones and feature phones (smartphones from €402 in 2009 to €316 in 2013, feature phones estimated drop from €42 to €28)
- Handset replacement cycle varies by country but for the purposes of this study it is estimated to be around two years
- Global market has grown significantly (especially in terms of value)

# Part I – Market Overview (Chargers)

- Two main markets for mobile phone chargers ('in the box' with new phones and 'standalone')
- In the box sales: decoupling very limited (in 2013, 0.05% of new handsets sold without chargers; there are now three schemes that sell phones without chargers)
- Standalone charger sales range from 18 to 30 million units (9% to 14% of all mobile chargers sold)
- The MoU is estimated to have resulted in a reduction in standalone charger sales

# Part I – Impacts of the MoU (1/2)

- Three approaches for estimating MoU compliance have been used (market share of signatories, information collected through consultation, market model)
- Market share of MoU/Lol signatories approx. 80-90% (all handsets)
- Consultation: handset sales: 95% in 2011, 100% in 2013 (data-enabled); 67% in 2011, 93% in 2013 (all handsets)
- Market model:
  - Sales: 80% in 2011, 99% in 2013 (data-enabled); 66% in 2011, 93% in 2013 (all handsets)
  - Stock: 91% in 2013 (data enabled), 80% in 2013 (all handsets)

# Part I – Impacts of the MoU (2/2)

- Impacts on handset manufacturers limited, main reasons being:
  - Focus on new model releases
  - Sufficiently long transition period
- Micro-USB more expensive than proprietary charger (estimated at EUR 0.50 covering both charger and handset), additional costs correspond to 0.15% of European smartphone ASP and 1.6% of European feature/basic phone ASP
- Increase in consumer convenience (although this depends on the need for adapters)
- Some reduction in the consumption of raw materials
- Safety impacts

## Part II – Market Overview (Other Devices)

- Tablets: Growing market, European sales 24 million units in 2012
- E-readers: Shrinking market, globally 11m units (2013), Europe 16% (2014)
- Laptops: Decreasing market, Europe: 67 million units (2013)
- Digital cameras and camcorders: Europe large market in the past but decreasing
- Portable media devices: Shrinking market
- Sports and activity monitors: Globally 44m units (2013), trend not clear
- Personal navigation devices: Europe 9.5m units (2013), down from 2008
- Portable handheld games consoles: Shrinking market
- Personal care products: Europe large market for epilators and shavers

## Part II – Impacts of MoU (Other Devices 1/2)

- Market share of devices with the Micro-USB charging solution has increased over the period 2009-2013 in the following market sectors: tablets, e-readers, personal navigation devices and portable handheld games consoles
- For laptops, portable media players, sports and activity monitors, and personal care devices, however, virtually no (or very few) Micro-USB charging solutions appear to have been adopted and proprietary charging is dominant



## Part II – Impacts of MoU (Other Devices 2/2)

- Tablets: Micro-USB market share 2011/12: 17%, 2013: 47%
- E-readers: Micro-USB market share 2011 onwards: 97%
- Laptops: Only one model uses Micro-USB
- Digital cameras and camcorders: Small number of models use Micro-USB
- Portable media devices: Proprietary dominant
- Sports and activity monitors: Few devices use Micro-USB
- Personal navigation devices: Micro-USB market share variable (2010: 14% , 2012: 70%, 2013: 27%)
- Portable handheld games consoles: Mostly proprietary but recently also Micro-USB
- Personal care products: Predominantly proprietary

# Part III – Options for Further Harmonisation

- Technical options: proprietary chargers, Micro-USB (2.0, 3.x, Power Delivery), Type-C, another standardised connector, wireless charging
- This study has assessed the impacts of using Micro-USB for three groups of devices: a) mobile phones and devices charging at similar power, b) tablets, and c) laptops
- Policy options:
  - Option 0 (Do Nothing)
  - Option 1 (Voluntary Agreement), possibly involving facilitation by an external actor. Variants include a) not allowing or b) allowing adaptors where connectors do not conform to the standard
  - Option 2 (EU Legislation), requiring that certain chargers are used, and possibly including a procedure for adaptation to technical progress. Variants include a) not allowing or b) allowing adaptors

## Part III – Mobile Phones (Option 0)

- Factors affecting level of harmonisation under Option 0:
  - In the short term, Micro-USB to remain dominant
  - In the medium term, innovation expected
  - USB Type C
  - Increasing power
  - Increasing market share of smartphones
  - Measures to address unsafe chargers
- Extrapolating current trends suggests that 2% of new handsets will be decoupled from charger sales in 2020

## Part III – Further Harmonisation (1/2)

- Consumer convenience likely to be enhanced under Options 1 and 2 but degree depends on adapters and power range
- Costs and benefits to manufacturers, consumers and the environment would depend on the degree of decoupling
- Higher rates of decoupling increase cost savings to consumers but also mean that manufacturers of chargers and cables would suffer revenue losses
- Modelling suggests that mobile phone users may benefit from cost savings should the rate of decoupling in the mobile phone market exceed 7%; below this rate, harmonisation may impose net costs on consumers

## Part III – Further Harmonisation (2/2)

- Raw material savings from decoupling
- Decoupling required in excess of current rates and difficult to achieve in innovative sectors
- Some stakeholders expressed concerns about potential side effects of harmonisation (safety concerns)
- Issues associated with different voltages and currents, even where power is similar
- Need for consumer education if disappointment and risks are to be avoided

Thank you!