Case M.8415 - ENNOCONN / S&T

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REGULATION (EC) No 139/2004 MERGER PROCEDURE

Article 6(1)(b) NON-OPPOSITION Date: 12/05/2017

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EUROPEAN COMMISSION



Brussels, 12.5.2017 C(2017)3346 final

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PUBLIC VERSION

To the notifying party:

Subject: Case M.8415 – Ennoconn / S&T

Commission decision pursuant to Article 6(1)(b) of Council Regulation No 139/2004¹ and Article 57 of the Agreement on the European Economic Area²

Dear Sir or Madam,

On 31 March 2017, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation by which the undertaking Ennoconn Corporation ("Ennoconn", Taiwan), a company in which Hon Hai Precision Co Ltd ("Hon Hai", Taiwan) holds an equity interest, acquires within the meaning of Article 3(1)(b) of the Merger Regulation *de facto* control of the whole of the undertaking S&T AG ("S&T", Austria) by way of a purchase of shares (the "Transaction").³ Ennoconn is designated hereinafter as the "Notifying Party".

OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

Publication in the Official Journal of the European Union No C 111, 8.4.2017, p. 13.

1. THE PARTIES AND THE OPERATION

- (2) Ennoconn is a Taiwanese public company that provides electronics manufacturing services ("EMS") to electronics original equipment manufacturers ("OEMs") on a worldwide basis.
- Hon Hai⁴ holds an equity interest of 40.09% in Ennoconn and is also a global (3) provider of EMS to OEMs of electronic products such as computers, mobile phones, video game consoles and televisions.⁵
- **(4)** S&T is an Austrian company active in the development of hard- and software based appliances and embedded solutions, and provision of information technology services such as system integration, software development and maintenance and outsourcing services. S&T AG is present in more than 20 countries.
- (5) As per a Share Subscription Agreement and a Share Purchase Agreement, both signed on 13 October 2016 between Ennoconn and various sellers, Ennoconn will become the ultimate holder of a 28.98% stake in S&T. Based on the attendance rates to S&T's shareholders meetings for the past six years, it is highly likely that Ennoconn will reach a stable majority of the votes in future annual shareholders' meetings. In light of the average attendance rate over the last six years, Ennoconn's share of 28.98% would account for 72.9% of voting rights.7
- (6) Accordingly, Ennoconn will be able to pass, on its own, shareholders' resolutions (adopted by simple majority) and to appoint the majority of the members of the supervisory board (who will appoint the board of directors). Other shareholders do not hold any veto rights relating to strategic decision making in S&T.

Hon Hai is Ennoconn's largest shareholder with a shareholding of 40.09%.

Based on the past attendance rates to Ennoconn's shareholders meetings, Hon Hai has the power to exercise more than half of the voting rights at the annual shareholders meetings (the average attendance rate in the past three years amounted to 68.47%, which provides Hon Hai with a majority of 58.51% of votes in the shareholders' meetings). In light of this and for the sake of completeness, the Commission has taken the activities of Hon Hai into account in its assessment for the purposes of its decision. Accordingly, Ennoconn, Hon Hai and S&T are together referred to as the "Parties" for the purposes of this decision.

Attendance rates in S&T shareholders' meetings since 2011 were as follows: 2011: 54.38%; 2012: 50.19%; 2013: 6.09%; 2014: 41.83%; 2015: 43.85%; 2016: 42.32%. As regards the attendance rate of the shareholders' meeting from 2013, the Notifying Party explained that the main shareholders did not attend since they considered appealing a ruling from the Austrian Takeover Commission pursuant to which the then-shareholders Quanmax Inc., Quanmax Malaysia Sdn. Bhd., Grosso Holding Gesellschaft mbH and Hannes Niederhauser were acting in concert and had to make a public takeover offer. Grosso Holding Gesellschaft mbH eventually had to issue a public takeover offer to the remaining shareholders which was accepted to an extent of 255.574 (or 0.65%) shares in S&T. Since 2015, the Takeover Commission no longer considers that the group of shareholders act in concert.

Even if the voting rights of Ennoconn were limited to a total of 26% of all shares with voting rights pursuant to Section 26a(2) of the Austrian Takeover Act, according the attendance rates of the last three years, it would result in Ennoconn still having a majority of 60.9% at the shareholders meeting on average over those three years.

- (7) As a result, the Commission considers that Ennoconn will exercise *de facto* sole control over S&T.
- (8) The Transaction therefore constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

2. EU DIMENSION

(9) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million⁸ (Hon Hai⁹: EUR 127 190.8 million; Ennoconn: EUR [...] million; S&T: EUR 936 million). Each of them has an EU-wide turnover in excess of EUR 250 million (Hon Hai/Ennoconn: EUR [>250] million; S&T: EUR [>250] million), but they do not achieve more than two-thirds of their aggregate EU-wide turnover within one and the same Member State. The notified operation therefore has an EU dimension.

3. MARKET DEFINITION

- (10) The Transaction does not give rise to horizontal overlaps but only to a limited number of vertical relationships between the Parties' activities, of which only two involve affected markets:¹⁰
 - a. the provision of EMS (Hon Hai/Ennoconn) used as an input by for the manufacture of embedded systems (S&T), and
 - b. the provision of EMS (Hon Hai/Ennoconn) used as an input for the manufacture of smart grid equipment (S&T).

3.1. EMS

(11) EMS consist of providing the products and services that an electronics OEM requires for its end products, including the design of the product, component selection and procurement, prototyping, product assurance, production, assembly, testing, failure analysis, logistics, distribution and after-sale services.

3.1.1. Product market definition

(12) The Notifying Party submits that the relevant product market is the market for EMS including EMS activities of OEMs.

⁸ Turnover calculated in accordance with Article 5 of the Merger Regulation.

Hon Hai has the power to exercise more than half of the voting rights at the annual shareholders meetings of Ennoconn. On this basis, and pursuant to Article 5(4)(b)(ii) of the Merger Regulation, the Commission considers that Hon Hai is an undertaking concerned for the purpose of turnover calculation.

There is an additional, hypothetical vertical relationship between the Parties: the production of display panels (Hon Hai) used as an input into the manufacture of embedded systems (S&T). Since each the Parties' market shares in (i) the supply of display panels and (ii) the manufacture of embedded systems are below 30%, this hypothetical relationship does not give rise to a vertically affected market and will not be further analysed in this decision. Hon Hai's upstream market share is higher than 30% only in small panels for smart watches, but S&T does not produce embedded systems for smart watches.

- (13) The Notifying Party further submits that there is no need to sub-divide the EMS market either by end product, or by industry sector because EMS providers use generic production lines allowing them to swiftly change production between different products/industries. Moreover, it would be artificial to distinguish between OEM in-house EMS and third-party EMS, notably because (i) OEMs can easily switch back from the outsourced production to in-house and (ii) it is common for OEMs to utilise both in-house EMS and third party EMS concurrently.
- (14) The Commission has previously contemplated segmenting the EMS market based on two criteria: (i) by product categories, such as communications, computers and consumer goods;¹¹ (ii) by the industry in which the final product will be used.¹² The Commission also considered whether in-house EMS production by OEMs and EMS production by third parties should be part of the same relevant market.¹³ The product market definition was ultimately left open.
- (15) Some EMS providers responding to the market investigation indicated that, even though they were not currently offering EMS for embedded systems and smart grids, they would be able to extend their EMS offering to embedded systems and smart grid products within a short period of time (less than a year, depending on complexity of the products and the volumes to be manufactured). Accordingly, these market participants confirmed that there is some degree of supply-side substitutability in the provision of EMS for various industries.
- (16) For the purpose of this decision, the exact product market definition for the provision of EMS can be left open, since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible market definition.

3.1.2. Geographic market definition

- (17) The Notifying Party submits that the relevant geographic market is worldwide based on the following reasons: (i) EMS providers operate across the globe; (ii) barriers to cross-border trade are low; (iii) shipping costs are low relative to price; (iv) product standards and specifications apply similarly worldwide; and (v) a substantial proportion of the EEA demand for EMS is satisfied by imports, particularly from China and Southeast Asia.
- (18) The market investigations in *Hon Hai / Sharp* and *FIH Mobile / Feature Phone Business of Microsoft Mobile* suggested that the geographic market for EMS was worldwide, but the Commission ultimately left open the exact geographic

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See *inter alia*, Commission Decision of 20 June 2016 in case M.8023 – *Hon Hai Precision / Sharp*, paragraphs 16-17; Commission Decision of 22 September 2016 in case M.8109 – *FIH Mobile / Feature Phone Business of Microsoft Mobile*, paragraphs 16 and 18.

¹² Commission Decision of 20 June 2016, in case M.8023 - *Hon Hai / Sharp*, paragraph 16.

Commission Decision of 28 September 2010, in case M.5765 – Foxconn / Dell (Products) Poland, paragraphs 17-24; Commission Decision of 20 June 2016, in case M.8023 Hon Hai Precision / Sharp, paragraphs 14-17; Commission Decision of 22 September 2016, in case M.8109 – FIH Mobile / Feature Phone Business of Microsoft Mobile, paragraphs 17-18.

See responses to the market investigation of 3 April 2017, question 2.

scope of the market for EMS.¹⁵ The market investigation conducted in the case at hand did not suggest any differences that would justify departing from the Commission's findings in the above-mentioned decisions.

(19) For the purpose of this decision, the exact geographic market definition can be left open, since the Transaction does not raise serious doubts as to its compatibility with the internal market regardless of whether the market is considered to be worldwide or EEA-wide.

3.2. Embedded systems

(20) Embedded systems are comprised of displays, computer boards and networking modules, together with the necessary software. The solution is then integrated into technology products. S&T develops, manufactures and sells minicomputers for the embedded systems market, for a variety of industry sectors. To

3.2.1. Product market definition

- (21) According to the Notifying Party, the product market definition for embedded systems can be left open, given S&T's minor market share irrespective of possible further segmentations of the embedded systems market.
- (22) In the past, the Commission considered whether the market for embedded computing systems should be further segmented by industry sector and whether it should include embedded computing systems designed and supplied in-house by downstream companies. The exact product market definition was ultimately left open. ¹⁸ Based on the results of the market investigation, there is nothing to suggest that the Commission should depart from its previous findings.
- (23) For the purpose of this decision, the exact product market definition for the supply of embedded systems can be left open, since the Transaction does not raise serious doubts as to the compatibility with the internal market under any plausible market definition.

3.2.2. Geographic market definition

(24) The Notifying Party submits that the relevant geographic market for embedded systems is worldwide, notably because of the existence of many embedded systems providers operating globally.

Commission Decision of 20 June 2016, in case M.8023 *Hon Hai Precision / Sharp*, paragraph 19-20; Commission Decision of 22 September 2016, in case M.8109 – *FIH Mobile / Feature Phone Business of Microsoft Mobile*, paragraphs 20-22.

Commission Decision of 6 October 2016, in case M.8183 – *Avnet / Premier Farnell*, footnote 9.

S&T confirmed that it does not distribute embedded systems of third party manufacturers. As a result, S&T is not a distributor of embedded systems in the sense of, for instance, the Commission decision of 3 October 2013, in case M.6863 – *Avnet EMG/ MSC Investoren*, paragraphs 16 to 20.

Commission Decision of 20 November 2007, in case M.4933 – *Emerson Electric Co / Motorola ECC*, paragraphs 7-10.

- (25) In the past, the Commission considered the geographic market for embedded computing systems was at least EEA-wide, if not worldwide.¹⁹
- (26) For the purpose of this decision, the exact geographic market definition can be left open, since the Transaction does not raise serious doubts as to its compatibility with the internal market regardless of whether the market is considered to be worldwide or EEA-wide.

3.3. Smart grid equipment

Smart grids are energy networks that can automatically monitor energy flows and adjust to changes in energy supply and demand accordingly. S&T supplies complete solutions for power suppliers to convert their electricity grids. These solutions usually consist of four layers: (i) smart meters, ii) data concentrators, iii) meter data management, and (iv) back-end integration.

3.3.1. Product market definition

- The Notifying Party submits that the relevant product market is the market for smart grid solutions, which encompasses the development of hardware and software for the networking and control of electricity generators, electricity storage facilities, electricity consumers and grid operators in the energy transmission and distribution grids supplying electricity. The Notifying Party further explains that it is not necessary to further segment smart grid solutions between hardware (smart meters and data concentrators) and software (meter data management and back-end integration), as this would not reflect the economic reality of the demand-side, since customers typically procure integrated solutions including hardware and software.
- (29) For the purpose of the present decision, the exact product market definition for the supply of smart grid solutions can be left open, since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible market definition.

3.3.2. Geographic market definition

(30) The Notifying Party submits that the relevant geographic market for smart grid equipment is at least EEA-wide, as many suppliers of smart grid solutions are at

Commission Decision of 20 November 2007, in case M.4933 – *Emerson Electric Co / Motorola ECC*, paragraph 11.

See: https://ec.europa.eu/energy/en/topics/markets-and-consumers/smart-grids-and-meters.

Smart meters measure the power consumption and other quality parameters, such as overvoltage, undervoltage, peaks, interferences, and communicate with other devices in the smart grid.

The data provided from the smart meters are aggregated by data concentrators (usually residing at switching stations) and feeded into the central meter data management application.

The meter data management software application is responsible for the provisioning of the whole smart grid (with updates or security patches), detect smart meters which are off-line, structure the data and feed it into the central Enterprise Resource Planning ("ERP") system.

Within the backend ERP system the data is processed according to the use case of the distribution network provider, such as billing process, dunning process, and proactive maintenance.

- least active across the EEA and customers procure the products are demanded accordingly as well.
- (31) For the purpose of the present decision, the exact geographic market definition can be left open, since the Transaction does not raise serious doubts as to its compatibility with the internal market.

4. COMPETITIVE ASSESSMENT

4.1. Introduction

As explained in paragraph (10), the Transaction give rise to two vertical relationships (i) between Hon Hai/Ennoconn's EMS and S&T's embedded systems; and (ii) between Hon Hai/Ennoconn's EMS and S&T's smart grid solutions, which will be analysed together below. These vertical relationships only give rise to affected markets under some narrower market definitions, as set out in Table 1.

4.2. Market shares

(33) Table 1 provides Hon Hai/Ennnoconn's EMS market shares according to the relevant segments which can be considered as upstream of S&T's activities.

Table 1: Hon Hai/Ennoconn's market shares in EMS – 2016 – By value (%)

	Worldwide		EEA ²⁵		
	Including	Excluding	Including	Excluding	
	OEM's in-	OEM's in-	OEM's in-	OEM's in-	
	house	house	house	house	
	activities	activities	activities	activities	
EMS	[5-10]	[20-30]	[0-5]	[30-40]	
	EMS by sector				
Automotive	[0-5]	[0-5]	N/A	[0-5]	
Healthcare ²⁶	[0-5]	[0-5]	N/A	[0-5]	
Industrial	[0-5]	[5-10]	N/A	[5-10]	
Military and aerospace	[0-5]	[0-5]	N/A	[0-5]	
Telecommunications	[10-20]	[40-50]	N/A	[40-50]	

Source: NVR Report and Notifying Party's estimates, Form CO – Section 7.

(34) Hon Hai/Ennoconn's worldwide market share only give rise to an affected market in the telecommunications industry, when OEM's in-house activities are excluded from the size of market. The Notifying Party submits that this market share can be explained by Hon Hai's strong footprint in areas such as EMS for consumer electronics, most prominently as a supplier of Apple for the "iPhone".

The NVR Report only contains EEA data by industry excluding OEM's in-house activities.

Ennoconn had [information regarding the sales of EMS] in 2016; Hon Hai had minimal sales [information regarding the sales of EMS].

- (35) At EEA-level, based on the NVR report, the Notifying Party estimates that the OEM's in-house activities account for approximately 90% of the overall EMS market in the EEA; leaving only 10% of the EMS market to third-party EMS providers. This background explains the significant difference in Hon Hai/Ennoconn's EEA market share including or excluding in-house activities of OEMs. Accordingly, Hon Hai/Ennoconn's EMS market share in the telecommunications sector would also be much lower (and in any event below 30%) when including OEM's in-house activities.
- As regards EMS market shares according to the final product, the Notifying Party explains that the NVR report does not contain data relating to EMS for embedded systems as a separate category. The Notifying Party is not in a position to provide market shares for EMS for embedded systems, because embedded systems are used in different industry sectors.²⁷ Moreover, Ennoconn and Hon Hai supply EMS to a wide variety of customers and do not record for which final product and purpose the EMS is essentially used by the customer. As regards EMS for smart grids, the Notifying Party adds that Hon Hai and Ennoconn do not provide EMS for smart grids, so that there is no vertical link when taking into consideration this narrow market definition.
- (37) Table 2 sets out S&T's market shares in embedded systems, which are consistently below 5%.

Table 2: S&T's market shares in embedded systems – 2016 – By value (%)

	Worldwide		EEA		
	Including in-	Excluding in-	Including in-	Excluding in-	
	house	house	house	house	
	activities	activities	activities	activities	
Embedded systems	[0-5]	[0-5]	[0-5]	[0-5]	
	Embedded systems by sector				
Automotive	[0-5]	[0-5]	[0-5]	[0-5]	
Healthcare	[0-5]	[0-5]	[0-5]	[0-5]	
Industrial	[0-5]	[0-5]	[0-5]	[0-5]	
Military and	[0-5]	[0-5]	[0-5]	[0-5]	
aerospace					
Telecommunications	[0-5]	[0-5]	[0-5]	[0-5]	
Others	[0-5]	[0-5]	[0-5]	[0-5]	

Source: Grand View Research and Notifying Party's estimates, Form CO – Section 7.

(38) Based on industry reports and its internal calculations, the Notifying Party estimates that S&T's market share in smart grids in the EEA amounted to [0-5]% (by value) in 2016.

4.3. Vertical assessment

4.3.1. Notifying Party's view

(39) The Notifying Party submits that post-Transaction the merged entity would not have the ability to engage in <u>input foreclosure</u> with regard to the provision of

Hon Hai/Ennoconn's EMS market shares by industry sectors are provided in Table 1.

EMS. First, Hon Hai/Ennoconn's worldwide EMS market share is well below 30%, with the exception of EMS for the telecommunication industry.²⁸ Second, the EMS market is a highly competitive environment: there is over-capacity in the market, entry barriers are low and customers exercise a strong downward pricing pressure. Finally, there is a high supply-side substitutability between EMS used for various industries/final products: OEMs and third-party EMS providers are able to easily shift equipment, production processes and staff because they use generic production lines that can be employed to produce and assemble products for different industries. Accordingly, they can switch the production from one segment to another at short notice and at low cost. Consequently, competitors of S&T do not have to rely on Ennoconn or Hon Hai for their input products for embedded systems / smart grids but can choose to source the relevant input products from any competitor of Ennoconn or Hon Hai or to manufacture EMS in-house.

Equally, the Notifying Party submits that post-Transaction the merged entity would not have the ability to engage in <u>customer foreclosure</u> with regard to the purchase of EMS for embedded systems and smart grids. S&T's market share in embedded systems and smart grids is well below 5%, irrespective of the market definition. Moreover, even in a worst case scenario in which S&T would start sourcing its entire demand of EMS for embedded systems (approximately EUR [...] million) from Hon Hai/Ennoconn only (contrary to its current practice of having around different EMS providers) this would not significantly affect the EMS market. Hon Hai/Ennoconn's upstream rivals could still provide EMS services to many other customers.

4.3.2. Commission's assessment

- (41) The Commission does not consider that the Transaction raises <u>input foreclosure</u> concerns with regard to the provision of EMS for the manufacture of embedded systems and smart grid solutions. The merged entity would have no ability or incentive to raise the costs of S&T's downstream rivals by restricting their access to EMS for the following reasons.
- (42) First, Hon Hai/Ennoconn's EMS market share is, in most cases, limited.²⁹ Accordingly, the merged entity will continue to face competition from rivals in the upstream market for the provision of EMS which would be in a position to continue providing EMS for embedded systems and for smart grids. In particular, the merged entity will continue to face competition from Jabil, Pegatron, Flextronics, Wistron. In this respect, the market investigation confirmed that the EMS industry is competitive with a large number of EMS providers.³⁰
- (43) Second, the market investigation indicated that suppliers of embedded systems and smart grids tend to diversify their EMS sourcing by obtaining the required

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As explained in paragraph (34), Hon Hai's relatively high market share in EMS for the telecommunication industry can be explained by the fact that Apple is an important customer of Hon Hai.

As regards EMS for smart grids, the Commission notes that Ennoconn and Hon Hai are not active in this segment.

See responses to the market investigation of 3 April 2017, question 4.

services from several EMS providers and/or by having in-house EMS capacities.³¹ As indicated above, there are various suppliers on the market which suppliers of embedded systems and smart grids could turn to.

- Third and beside this, the market investigation confirmed, to a large extent, the supply-side substitutability between EMS used for various industries/final products. The majority of respondents to the market investigation took the view that EMS providers that are not currently offering EMS for embedded systems and smart grids, would be able to extend their EMS offering to embedded systems and smart grid products within a short period of time (less than a year, depending on complexity of the products and the volumes to be manufactured).³²
- (45) Fourth, given S&T's limited market position, it is unlikely that the merged entity would benefit in the event that it stopped selling or increased prices of EMS to competing downstream suppliers of embedded systems and smart grids. The merged entity therefore would lack the incentive to adopt such a foreclosure strategy as it is unlikely that it would recuperate the revenues lost from withholding the provision of EMS to downstream competitors.
- (46) Finally, no market participants indicated that the Transaction could give rise to input foreclosure concerns with regard to the provision of EMS for the manufacture of embedded systems and smart grid solutions.³³
- (47) Equally, the Commission does not consider that the Transaction raises <u>customer</u> foreclosure concerns. The merged entity would have no ability or incentive to foreclose upstream rivals in EMS by restricting their access to a sufficient customer base.
- (48) S&T cannot be considered as an important customer in the market for the acquisition of EMS. In 2016, S&T procured approximately EUR [...] million of EMS, in a market worth 91 202 million, thus amounting to a share of [0-5] %.³⁴ Moreover, S&T's market share in embedded systems and in smart grids are consistently well below 5% at worldwide and EEA-level, and irrespective of the industry segment and whether in-house sales are included or not in the total market size.
- (49) These very low market shares, in the Commission's view, exclude competition concerns with regard to customer foreclosure, as the merged entity would not have the ability or the incentive to foreclose competing providers of EMS due to the very small size of S&T and its EMS needs. Accordingly, if S&T were to cease purchasing EMS from Ennoconn/Hon Hai's upstream rivals, these rivals would continue to have sufficient alternative customers to which they could provide their EMS.

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See responses to the market investigation of 3 April 2017, questions 2, 3 and 5.

See responses to the market investigation of 3 April 2017, question 2.

See responses to the market investigation of 3 April 2017, questions 6 and 7.

Excluding OEM's in-house activities, S&T's share of purchase of EMS would amount to [0-5]%.

- (50) Furthermore, no market participants indicated that the Transaction could give rise to customer foreclosure concerns with regard to the purchase of EMS for embedded systems and smart grids.³⁵
- (51) The Commission therefore considers that the merged entity would not have the ability or incentive to adopt an input or customer foreclosure strategy post-Transaction in these markets.
- (52) In light of the above, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market.

5. CONCLUSION

(53) For the above reasons, the European Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(Signed)

Margrethe VESTAGER Member of the Commission

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