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Methodology

Digital Fuel Monitor 8th release 2H2017

Digital Fuel Monitor (DFMonitor) tracks 4G internet access prices and data caps in EU and OECD countries.

DFMonitor tracks two types of 4G LTE plans: 4G LTE smartphone plans with at least 1,000 national minutes and 4G LTE mobile broadband (data-only) plans.

The DFMonitor 8th release 1H2017 tracked 1,628 4G LTE tariff plans offered by 137 operators and 58 major MVNOs in EU28 & OECD. During November 2017 4G LTE smartphone tariff plans with at least 1,000 or unlimited minutes were offered by all EU28 and OECD operators. In all EU28 & OECD markets smartphone plans with at least 1,000 minutes were the de facto monthly rolling plans offered by operators. DFMonitor's 8th release includes 949 smartphone tariff plans and 679 mobile broadband (data-only) tariff plans. The 137 operators present in the 41 countries are part of 70 operator groups. DFMonitor tracked tariff plans from the main brands of all 137 operators and as well from 49 sub-brands that are owned by operators and 58 independently owned Mobile Virtual Network Operators (MVNOs). Joint ventures between mobile network operators and third parties e.g. Tesco Mobile UK is presumed not to be independent and therefore are designated as sub-brands. Operators that have not yet launched 4G LTE with their own frequencies (LuxemburgOnline in Luxemburg, Melita in Malta and T-2 in Slovenia) and operators that did not offer smartphone plans inclusive of 1,000 minutes allowance but only had per minute available charges (Max Telecom in Bulgaria) were excluded.

Data collection methodology

All underlying data (tariff plans, number of SIMs per operator, total mobile data volumes per country and operator, spectrum holdings per operator, penetration, etc.) were collected from public sources. Smartphone and mobile broadband (data-only) tariff plan prices were collected online from the operator websites during November 2017. Our data collection team could read and understand English, Finnish, Swedish, French, Greek and Hungarian. For the remaining operator web sites which were not available in any of these six languages the team used the automatic translation function of Google. The data collection team has taken and archived screen shots from every single operator tariff that was used in the comparative analysis and as well downloaded and archived the tariff terms and condition wherever available.

DFMonitor's 8th release 2H2017 includes 949 consumer monthly rolling 4G LTE smartphone tariff plans having a minimum of 1,000 national minutes and 679 mobile broadband (data-only) tariff plans including plans intended for stationary home broadband use that had a minimum 4G speed of 3 Mbps for supporting HD video streaming at all times. We logged all the SIM-only tariffs and in rare occasions tariffs with handset subsidies that have higher gigabyte volume allowance than the maximum possible that consumers could obtain with SIM-only tariffs. The following parameters have been collected for each tariff: the date and time of collection, the country, the operator name, the brand name of the operator, the brand type (operator main or sub-brand or MVNO), the price in local currency, the included data allowance, the included minute & SMS allowances, the maximum download speed of data if applicable, tethering restrictions if applicable, mobility restrictions if applicable (stationary mobile broadband tariffs for e.g. home usage) handset subsidies if applicable, tariff name and any applicable options and finally the URL of the operator.

Every tariff has been marked with 'Yes' (tethering allowed with no restrictions) where we found written documentation (web site notes, product browsers, tariff information sheets, terms and conditions of service, support pages and responses, forum

responses, etc.) that tethering functionality for the entire volume is allowed or with 'No' where we found written documentation that there are tethering restrictions or where the customer service teams have stated that tethering is not allowed. For operators that we did not find any information we inserted the question mark symbol in the DFMonitor-PRO Spreadsheet but presumed that tethering is allowed.

All commercial promotions available at the time of collection were taken into account (e.g. 2 month free if purchased online or 10% off if purchased before the 5th of May 2017). Bundle offers such as fixed broadband plans combined together with smartphone or mobile broadband plans or offers for special customer groups such as second family line for 25% off, youth offers, senior offers, etc. were excluded. If a tariff plan was cheaper with longer contract duration we logged in the database the lowest available price (e.g. 10% off for 24 month contract). If an operator did not offer SIM-only tariff plans we logged the operator's cheapest available plans with handset subsidy that fulfilled all other conditions.

The database includes off-the-shelf tariff plans (e.g. RED S 1GB, RED M 3G, RED L 5GB) and as well added additional data or options that increase the total monthly data allowance wherever applicable. We only considered eligible monthly rolling data add-ons. One time use add-ons that expired in the end of the billing cycle were excluded. Promotions that temporary increased the volume allowance or maximum speed were taken into account only if they were applicable for the entire duration of the tariff contract or in case of monthly rolling contracts for minimum 12 months.

No Purchase Power Parity (PPP) operation has been performed on the raw tariff plan prices. Prices in EUR are the retail VAT included prices found on the operator web sites. Prices in other national currencies have been converted to EUR by simply using the exchange rate displayed by Google on the day of collection.

The tariff monthly fee does not include one-off fees (activation porting, service etc). Such fees, with few exceptions, do not significantly increase the monthly tariff fee for the duration of the contract or when they applied for a 12 month period in monthly rolling tariffs.

Plans with unlimited data volume

In DFMonitor's 7th 1H2017 release we designated plans marketed as unlimited (e.g. US plans) where the operators reserve the right to de-prioritize (throttle the speed below 3 Mbps) customer data at times of congestion after a pre-determined finite volume has been reached as unlimited data volume plans. In this 8th release we decided to change this classification because it appears that US operators are systematically throttling users that reach the de-prioritization threshold. Moreover, it appears that the de-prioritization volume threshold has become a key differentiation factor among unlimited data plans in the US (see T-Mobile recent increase to 50 GB). So any plan, in DFMonitor's 8th release 2H2017 marketed as unlimited where the operator has named a finite volume and reserved the right to throttle the speed below 3 Mbps has been designated as a finite volume plan with a volume equal to the named de-prioritization/throttling volume. Unlimited plans in DFMonitor's 8th 2H2017 release are plans without a named finite volume and a speed of at least 3 Mbps at all times. If an unlimited data volume plan had a finite volume limit for tethering/hotspot functionality we logged this information in the tariff data base but still considered it to be an unlimited volume plan.

Methodology for price metrics and charts

The DFMonitor 8th release 2H2017 uses three price metrics to analyse the tariff data. a) Maximum GBs that a predefined amount of EUR basket (e.g. GB for €30) buys in a country or for a given operator b) minimum price for a predefined GB basket (e.g. price for 100 GB) in a country or for a given c) fully allocated median price per gigabyte for operators, countries, EU28 and OECD.

The three price metrics are used both for smartphone and mobile broadband (data-only) tariffs. Below we provide additional details on how these metrics have been calculated and presented in the corresponding charts.

Maximum GBs that a predefined amount of EUR basket (e.g. GB for €30) buys in a country or for a given operator: Charts presenting this metric include tariffs from operator main or sub-brands or any MVNO that uses the operator network. Typically it is the main or sub-brand of an operator that offers the most GBs but in few exceptions an MVNO offers more for the given EUR basket and in that case the operator value appearing in the chart will be determined by the MVNO tariff. All tariffs are included in the comparison irrespective if they restrict or not tethering (smartphone plans) or if they are intended for stationary use only (mobile broadband plans). Unlimited smartphone plans were assigned a finite volume of 100 GB while unlimited mobile broadband (data-only) plans were assigned a finite volume of 300 and 500 GB for full mobility and stationary usage respectively. 100, 200 and 500 GB were the highest finite volume allowance €30 bought in smartphone plans, mobile broadband plans with full mobility and mobile broadband plans with stationary usage respectively during November 2018 in EU28 & OECD markets. Minimum price for a predefined GB basket (e.g. price for 100 GB) in a country or for a given operator: Same rules as above.

Fully allocated median price per gigabyte for operators, countries, EU28 and OECD: Fully allocated price per gigabyte is calculated as the tariff monthly fee that includes VAT divided by the included gigabyte volume allowance. Charts presenting the median price per operator include all tariffs from the operator main or sub-brands and as well the MVNO tariffs that use the operator network. All tariffs are included in the comparison irrespective if they restrict or not tethering (smartphone plans) or if they are intended for stationary use only (mobile broadband plans). Unlimited smartphone plans were assigned a finite volume of 100 GB while unlimited mobile broadband (data-only) plans were assigned a finite volume of 300 and 500 GB for full mobility and stationary usage respectively. 100, 300 and 500 GB were the highest finite volume allowance €30 bought in smartphone plans, mobile broadband plans with full mobility and mobile broadband plans with stationary usage respectively during April 2017 in EU28 & OECD markets.

Please do let us know if you notice any broken links, incorrect links, tariff errors, other errors, any tariffs that met the criteria at the time of data collection which we missed, any MVNOs that we might missed and offer competitive data caps and prices or if you would like to make suggestions for improvements by emailing us at research@rewheel.fi