DATA 4 REFUGEES CHALLENGE
PARTICIPATION AGREEMENT

This Agreement is signed by the duly authorized represanatives of the below mentioned Parties and effective from …./…./….;

    A. Türk Telekomünikasyon A.Ş. having its registered office at Turgut Özal Bulvarı 06103 Aydınlıkevler, Ankara, Türkiye (hereinafter designated as "Türk Telekom"); TTNET A.Ş. having its registrated office at Esentepe Mahallesi Salih Tozan Sokak No:16 Karamancılar İş Merkezi D Blok 34394 Şişli-İstanbul (hereinafter designated as "TTNET" olarak anılacaktır); AVEA İletişim Hizmetleri A.Ş. having it's registrated adress at Abdi İpekçi Cad. No:75 34367 Maçka, Şişli – İstanbul (hereinafter designated as "AVEA")
    and
    B. ……………………. having it's registered office at ………….. (hereinafter designated as "Participant")

Under this Agreement, Türk Telekom, TTNET, and AVEA together called "TTG",……… will be called as "Participant", and both TTG and Participant collectively referred to as the "Parties" and each individually as "Party".

TTG provides a special database to the scientific committee to enable research on refugee movements and to ultimately help the authorities in providing better conditions to refugees. The sharing requirements and the type of data that is to be shared will be determined solely by TTG. Access to this database is only possible by taking part in the "Data for Refugees" Challenge ("the Project"). Through the studies made with this special database, TTG aims to support the studies that will create better conditions for refugees in areas such as health, education, security, unemployment, integration and also to support the outreach programs for refugees carried by the administrative bodies.

Participants that contribute to the Challenge will aim to analyze information from the special database that is provided exclusively to them by TTG. The results of this studies will be shared with TTG with an explanation on the possible benefits of these outcomes to the refugees. The results that fulfill the Comittee's criterias will be awarded.

The Participant undertakes and agrees to be bound by the following conditions in order to take part in the Challenge. Participant has to send a signed copy of this Agreement by electronic mail to the electronic mail address mentioned on the Project website.

By signing this Agreement, the Parties undertake to comply with the terms and conditions below.

Article 1- Definitions

1.1. **"Affiliated Scientist"** shall mean any person or entity who is employee of the Participant or who is directly affiliated to the Participant within the framework of its research and studies by contract or

not or as a student. The names of the Affiliated Scientists participating in the Challenge are listed at the end of this document.

1.2. "**Applicable Law**" shall mean the relevant laws, regulations and other legislative acts that applies to this Agreement, such as Data Protection Law No. 6698 and Electronic Communications Law No. 5809. .

1.3. "**Awards**" shall mean the prizes that will be granted to Partcipants whose Results are selected by the Committee.

1.4. "**Challenge**" shall mean the contest in which Participants aim to create a project for benefit of the refugees and supporting administrative bodies through analyze of a special database that consists of anonymized mobile telecommunication data of refugees.

1.5. "**Comittee**" shall mean the entity composed of scientists and various personalities from national and international organizations and aims to evaluate the Results in terms of ethics, benefits and data security. Comitte member's names are mentioned on the Challenge website.

1.6. "**Copyrightable Results**" shall mean the elements of the Results that are or will be protected by intellectual property rights such as software and algorithms.

1.7. "**Data**" shall mean the database containing phone calls from mobile users of TTG made between January 2016 and January 2017. Data have been anonymized and aggregated by TTG and are made available to the Participant for the sole and limited purpose of the Challenge pursuant to criterias described in Annex-1 of this Agreement. Under the scope of the Project, the anonymized data is going to be used for the purposes of research and statistics. 3 special database sets has been prepared for this Challange.

1.8. "**Participant**" shall mean any legal person or entity which is non profit organization that applies to the Challenge with its authorized body to present a study made by Affiliated Scientists. İndependent natural persons can also apply as Participant.

1.9. "**Result**" shall mean the submission written document handed over by the Participant to TTG containing the solutions proposed by the Participant within the framework of the Challenge. On the basis of this document and its content, the Committee will determine the winners. Results may contain tables, maps and graphics..

Article 2- Entitlement to Participate in Challange- Offer and Award

2.1. In order to be able to participate in the Project, Participant has to be (i) an academic university / faculty and/or a scientific research institution (or an entity having an equivalent status) or (ii) a non-profit entity or (iii) legal person must be non profit organization or (iv) induvidual and independent research groups. For clarification purpose, Participant cannot be a commercial or industrial entity. If Participant's application is accepted, a unique access key will be sent to Participant in order to enable download of Data located on a web server.

2.2. Participant agrees, declares and undertakes to use reasonable efforts and utmost care to carry out research in compliance with the objectives of the Project, especially regarding processing and protection of Data. Participant must submit its contribution by the deadline announced on the Project web page.

2.3. By submitting to this Challenge, Participant agrees to comply with all applicable laws including but not limited to statutes, statutory decrees, international agreements, decisions/regulations issued by competent authorities and all relevant announcements, statements and briefings made by TTG. In case of non-compliance, Participant agrees, declares and undertakes to be exclusively liable of all legal, administrative and penal sanctions. In case of the not-destroyed, storage, transmission or processing any use of data and related information, legal, administrative and criminal liability shall be solely with the Participant.

2.4. TTG shall have the right to uniterally terminate this Agreement at all times via sending an notification email to the Participant in case one of the following events occur,

(i)   as a result of a change in legislative regulations; or
(ii) if the continuation of the Project is, in TTG's opinion, no longer viable; or ,
(iii) if Participant breaches the terms and conditions of this Agreement.

In this case, the Participant will irreversibly destroy the all Data and Data-related results from all stored spaces within one week of receipt of the termination notification email without further notice. Such destruction records will be submitted to TTG.

2.5. The Committee will define and announce the winners of the Challenge. five type of Awards will be given:
(i) 1st prize: "Safety Security Category"
(ii) 1 st prize: Health Category
(iii) 1 st prize: Education Category
(iv) 1 st prize: Unemployment Category(v) 1 st prize: Integration Category

2.6.

2.7. Participant acknowledges that Comittee posess the sole authority to define the winners according to its own criterias and that TTG does not posses any significant influance over Comittees authority and that under no circumstance it shall hold TTG responsible. In this respect, the Participant hereby declares that it will not object to the results of the Challenge, and that such objection will contitute material breach of this Agreement. In such case, TTG shall keep all its statutory and contractual rights reserved.

Article 3- Confidentiality

3.1. Participant shall keep Data and all other information disclosed by TTG for the purposes of the Challenge confidential. For protection of Data, Participant undertakes to apply at least the same degree of care with which it treats and protects its own confidential information against public disclosure, but not less than a reasonable degree of care. The "reasonable care" must contain all necessary measures to provide the Data protection at the same level as predicted in Law No. 6698 and Law No. 5809. The "reasonable care" shall ensure a level of protection according to TS ISO/IEC 27001 and/ or ISO/IEC 27001 standards or current ISO safety standards.

3.2. All Data and information shall be disclosed on a need-to-know basis. Data and other information shall not be disclosed to any third party without prior written consent of TTG. Participant shall irrevocably and accurately limit the use and access to Data to Affiliated Scientists and other authorized researchers only. Participant acknowledges that any disclosure of information (including but not limited to Data) to any unauthorized person shall constitute a material breach of this Agreement and violation of the applicable law and that it shall take all reasonable measures to prevent such disclosure. Participant is authorized and comissioned to take all necessary measures to prevent any unaothorized access and therefore in such case Participant is exclusively responsible from any legal, administrative and penal liability that might occur.

3.3. Participant is obliged to inform all persons that has conduct with the Data about Data confidentiality and the limited usage of Data meaning the usage being limited to the actualization of the purposes of Challenge. Participant agrees to be liable for violation of Appicable Law and this Agreement by all entities that has conduct with the Data. The degree of liability shall be objective (strict) liability and under the scope of commitment of a third party's action. It is agreed by both Parties that in such case TTG has the right and authority to directly appeal to Participant for compensation of all damages it endures due to actions of these entities and recourse all kind of payments made to third parties and public authorities such as compensation, penalty etc. TTG keep all its's statutory and contractual rights reserved.

3.4. Participant is responsible of making necessary notifications about confidential information to Affiliated Scientists and other authorized entities and to make sure that that they shall also act in compliance with the confidentiality provisions in this Agreement. Participant shall not disclose Data or any other information partialy or wholly to any other party.

3.5. Participant shall be responsible for all losses, damages and demands and other legal, administrative and penal liabilities that occur as a result of the actions of the Affiliated Scientists. The Participant accepts that any kind of monetary sanction (administrative fine, compensation etc.) that TTG confronts with due to gross negliegence or unlawfull intent of Participant and/or the Affiliated Scientists shall be immediately recoursed to Participant.

3.6 Participant shall be solely responsible for all losses, damages, demands and other legal, administrative, commercial and penal liabilities from relevant legislations that occur use of data out of purposes or use of unauthorized data.

Article 4- Consequences of Termination

4.1. This Agreement becomes affective upon its execution date and remains in force until the official announcement of the Challenge Awards. Upon the announcement of the Awards, this Agreemnt automatically terminates without any notice. For the avoidance of doubt, the official announcement of the Award winners may be made via project web-site or in a special seremony or during an international event. Participant, without prejudice to being awarded or not, must destroy all Data that is granted within the scope of the Challenge in one week starting from the official announcement of the Award winners. All records regarding the destruction of Data shall be submitted to TTG..

4.2. The obligations of the Participant under Article 3 ("Confidentiality") shall survive the termination of this Agreement.

4.3. After the termination of this Agreement, both Parties shall immediately cease to use the confidential information (including but not limited to Data) and intellectual property rights that belongs to the other Party if any.

Article 5- Restriction of use – Restitution

5.1. Participant agrees to use the Data only for the purposes of the Challenge and only until the official announcement of the Award Winners. As clearly stated on the Article 4.1., Participant is obliged to destroy all Data within one week starting from the date of the official announcement of the Award winners. Any other use of Data of any nature outside the scope of the Challenge by Participant and/or Affiliated Scientists or any other entity is submitted to the following conditions;

5.2. Participant can apply for an extension of the right to use Data after the announcement of the Awards only in order to proceed to additional scientific analysis and researches. To do so, Participant will have to send a written application to TTG within one week starting from the date of the official announcement of the Awards. The written application must contain the scope of the new researches Participant intends to carry out, the reason of the usage of Data and and the time period of the usage. TTG has no obligation to accept this application and Partcipant has no right to object TTG's decision in this respect.

5.3. Usage of Data shall only be permitted exclusively for non-profit purposes. In other words, Data cannot be used for commercial purposes. Participant accepts in advance that any application that indicates commercial use of Data shall not be accepted by TTG and that any kind of unauthorized commercial use of Data shall constitute material breach of this Agreement. In such case, TTG shall exercise all its's statutory and contractual rights, including but not limited to penal clause and immediate termination without any notice. In addition to that, Participant shall be exclusively responsible of any legal, administrative and penal liabilities that caused by commercial use of Data.

5.4. Participant is obliged to mention Data origin in all studies that Data is used. In other words, Participant must mation that Data was made available by TTG within the framework of Data 4 Refugees Challenge.

Article 6- Intellectual Property Rights

6.1. Parties agree that all the Data made available for the purposes of this Agreement are deemed the property of TTG.

6.2. Nothing in this Agreement shall be deemed to grant a license directly or by implication of any intellectual property rights related to the Data, except the limited and nontransferable right to use such Data for till the end of Project.

6.3. This Agreement shall not be deemed to create any obligation for either Participant or TTG to enter into any further contractual arrangement of any kind.

6.4. Copyrights of the Copyrightable Challenge Results will be property of Participant and Affiliated Scientists.

Article 7- Results

7.1. Participant presents its Results to TTG in a project report format and on the condition of having TTG's previous written consent for each Result, Participant may publish the Results in scientific papers or confrence presentations. Apart from that, TTG can also announce the Results in Award ceremony, or enable public acces to the Results via publishing them in scientific and commercial broadcasts/exhibitions/confrences. TTG undertakes to refer Participants project report in any such publications.

7.2. Upon written prior permission by TTG, Participant may use and publish the Results, including Copyrightable Results, after the official announcement of Awards. A copy of any material proposed for publication must be submitted to TTG prior to publication. TTG shall make its best efforts to make a decision as soon as possible. In case TTG does not make any response, application is deemed to be automatically declined after 30 work days of the date of the application of permission. In case the permission is granted by TTG, Participant can start the publishing procedures.

7.3. Participant undertakes to refer to the Project when it uses and/or publishes the Results as following: "Studies and Researches were performed using one-year anonymized mobile communication data made available by Türk Telekomünikasyon A.Ş. within the D4R Challenge."

7.4. For the avoidance of doubt, the intellectual property rights in all software, information, technology or data whatsoever supplied or made available by TTG to the other party under this terms and conditions shall remain the property of TTG. Except as expressly set out in this Agreement, neither party grants to the other any licence, sub-licence or other right in or to such intellectual property rights.

Article 8- Applicable Law-Jurisdiction

8.1. This Agreement shall be governed and construed as per Turkish law and the Parties agree that Istanbul (Caglayan) Courts and Execution Offices shall have jurisdiction over the disputes arising from this Agreement.

Article 9- Miscellaneus

9.1. Participant must provide all necessary security measures required by the applicable law. TTG shall be responsible for ensuring that the transfer of Data under these conditions conforms to applicable law.

9.2. Neither this Agreement nor any right granted hereunder shall be assignable or otherwise transferable without the prior written consent of the other Party.

9.3. No waiver or modification of this agreement will be binding upon the Parties unless made in writing and duly signed by an authorized representative of each Party and no failure or delay in enforcing any right, authority or privilage will be deemed a waiver.

9.4. In the event that any of the provisions of this Agreement shall be held by a court or other tribunal of competent jurisdiction to be unenforceable, the remaining partitions hereof shall remain in full force and effect. In such case the Parties shall cooperate, through negotiations in good faith, to replace any part of the Agreement hereto so held to be invalid or unenforceable with a legally binding, effective and applicable provision.

9.5. Notwithstanding Article 9.3., TTG can unilaterally modify the provisions of this Agreement and Annex -1 in anytime where such modification is estimated necessary, due to result of a change in applicable law or decisions of competent authorities, and other situations where a modification is required essential by TTG. For the avoidance of doubt, the Parties agree that TTG has the authority to change the type of Data that is to be shared with Participants under the scope of this Challenge at any time and Annex-1 does not constitute a commitment regarding the type of Data. Participant and Affiliated Scientists agree, declare and undertake to act in compliance with the unilateral changes made by TTG, and to be liable of any kind of legal and criminal liabilites including but not limited to any loss, damage and administrative fines and other claims made by third parties directed at TTG in case of non-compliance. In case TTG makes any payment to a third party due to non-compliance of Participant, the paid amount with all its ancillaries shall be recoursed to Participant and the Partcipant shall pay this amount within two weeks starting from the date of notification without any further notice. In case of late, partial or non- payment, all statutory and contractual rights of TTG shall be reserved.

9.10.

IN WITNESS WHEREOF, this Agreement is hereby duly executed by the duly authorized representatives of the Parties in 2 (two) copies on __/__/____ and each Party receive 1 (one) copy.

[Participant name]

………………………

….. [Participant title]

………………

[Participant signature]

……………………..

[Date and place of

signature]

………………

[Participant email]

…………………………

. [Participant phone

number] ………………

Names, emails and signatures of all affiliated scientists with access to Data

Scientist 1
Name and title:

………………

Email:

………………

….. Signature:

………………

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Scientist 2
Name and title:

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Email:

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….. Signature:

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Scientist 3
Name and title:

………………

Email:

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….. Signature:

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Scientist 4
Name and

title:

……………

… Email:

……………

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Signature:

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Annex-1

Description of TTG Refugee CDR Data

For this challenge, 3 CDR datasets will be made available, together with two files on cell tower locations.

TTG will target one year of mobile CDR data, between 1 January 2016 - 31 December 2016. In preparation of the dataset, users with an average of less than 1000 interactions per week will be used (The users with more than 1000 interactions per week are presumed to be machines or shared phones.)
All datasets will be stored in Tabulation Separated Values (TSV) plain text format.

Cell tower locations

For commercial and privacy reasons, TTG will not release the real geographical coordinates of the site where BTSs, the mobile network antennas, are located. Note that several BTS can be co-located. TTG will assign a new position to each site uniformly in its Voronoi cell (the region consisting of all points closer to that antenna than to any other) to prevent the re-identification of users. A CVS file that contains the new and noisy latitudes and longitudes of the sites will be prepared. Each line contains the site ID and an arrondissement ID. One arrondissement contains multiple sites.

For example:
site_id, arr_id, lon, lat
1,2,-17.5251,14.74683
2,2,-17.5244,14.74743
3,2,-17.5226,14.7452
4,2,-17.5164,14.74673

Prefecture locations
For coarse grained mobility, the cell towers are not provided, but only the prefecture is reported for each call. The cell towers are grouped into about 500 prefectures over the entire country. TTG records the geometric center of each region separately.
For example:
prefecture id, lon, lat
1, -17.5251,14.74683
2, -17.5164,14.74673

Dataset 1: Antenna traffic
One year site-to-site traffic on an hourly basis. This dataset contains the traffic between each site for a year. The files SET1V_M01.csv through SET1V_M12.csv contain monthly voice traffic between sites and are structured as follow:

timestamp: day and hour considered in format YYYY-MM-DD HH (24 hours format)
outgoing_site_id: id of site the call originated from
incoming_site_id: id of site receiving the call
total number_of_calls: the total number of calls between these two sites during this hour
number of calls originated from refugees: the number of calls originated from numbers with refugee status.

total call duration: the total duration of all calls between these two sites during this hour

total call duration originated from refugees: the total duration of calls between these two sites during this hour originating from refugee IDs.

For example:
timestamp, outgoing_site_id, incoming_site_id,... ...number_of_calls, refugee_calls, total_call_duration, refugee_call_duration
2013-04-01 00,2,2,7,1,138,20
2013-04-01 00,2,3,4,0,136,0
2013-04-30 23,1659,608,0,1,0,3601

Similarly, the files SET1S_M01.csv through SET1S_M12.csv contain monthly text traffic between sites and are structured as follows:

timestamp: day and hour considered in format YYYY-MM-DD HH (24 hours format)
outgoing_site_id: id of site the SMS originated from
incoming_site_id: id of site receiving the SMS
number_of_SMS: the total number of SMS between these two sites during this hour
number of SMS originated from refugees: the number of SMS originated from numbers with refugee IDs.

Dataset 2: Fine grained mobility
This dataset will provide the cell tower identifiers used by a group of randomly chosen active users to make phone calls and send texts. The data will be timestamped and a particular group of users will be observed for a period of 2 weeks. At the end of the two-week period, a fresh sample of active users will be drawn at random. Each sample contains 3% of the refugee base plus equal amount of non-refugee users. To protect privacy new random identifiers are chosen in every time period. Time stamps are rounded to the minute.
The phone numbers for these users are removed, and each one is assigned a unique random number instead. These numbers will start with 1 for refugees, 2 for non-refugees, 3 for unknown. However, during generation of this part, the indicator number will be randomly changed with 0.001 probability. Subsequently, it will not be possible to tell whether a call belongs to a refugee number or not with certainty; however, the error on the aggregate data is bounded. The callee is not included in the records, but only the prefix (1: refugee, 2: non-refugee, 3: unknown) is given. These prefixes are assigned after the random perturbation, so their values are incorrect with 0.001 probability.
Calls from a particular (antenna location/hour) pair are removed, if there are less than 25 calls from that pair to further protect the privacy of users. Additionally, incoming and outgoing calls will be paired in order to eliminate double counts (i.e. an incoming call for an individual is an outgoing call for the correspondent). For missing antenna locations, a code of -1 will be assigned.

The files SET2_M01.csv through SET2_M12.csv contain monthly voice traffic between sites and are structured as follow:

caller id: randomly assigned value, prefixed with digit indicating refugee status (1: refugee, 2: non-refugee, 3: unknown)
timestamp: day and hour considered in format YYYY-MM-DD HH (24 hours format)
callee prefix: 1: refugee, 2: non-refugee, 3: unknown
site_id: id of site recording the call
call type: 1 for outgoing, 2 for incoming

For example:
caller id, timestamp, callee prefix, site id, call type
1138, 2013-04-01 12:32, 1, 52, 1

309095, 2013-04-01 12:33, 3, -1, 2

Dataset 3: Coarse grained mobility
In this dataset, the trajectories of 50,000 randomly selected refugees and 50,000 randomly selected non-refugees are provided for the entire observation period but with reduced spatial resolution. The refugee/non-refugee prefixes are randomly perturbed with 0.001 probability.
The spatial resolution is reduced by replacing antenna identifiers with broader area identifiers, called prefectures. The map of Turkey will be divided into ~500 prefectures.

The files SET3_M01.csv through SET3_M12.csv will contain records of the form:

caller id: randomly assigned value, prefixed with digit indicating refugee status (1: refugee, 2: non-refugee)
timestamp: day and hour considered in format YYYY-MM-DD HH:MM (rounded to minute)
prefecture_id: id of site recording the call

For example:
caller id, timestamp, prefecture id
1138, 2013-04-01 12:32, -1,
209095, 2013-04-01 12:33, 23
176202, 2013-04-01 12:33, 75

Protection of privacy

1. Dataset 1 contains the number and duration of calls per cell tower. This dataset enables analysis of activity levels of different areas, as well as makes it possible to establish communication links between areas.
2. Dataset 2 contains detailed call records. To protect the privacy of users, phone numbers are replaced with random numbers, and only 2-weeks of data is recorded for any given user. Additionally, cell towers with less than 25 calls per period are removed from the records. The exact physical location per call is not shared. The dataset only records the id of the cell tower that handled the call. Since calls are not always handled by the nearest cell tower (depending on how busy a tower is, and about the physical lay of the land), this adds another layer of protection.
3. Dataset 3 contains records for an entire year, but the physical location is very coarsely indicated. Again, all personal information is removed. There is only the indicator of refugee status. However, throughout the challenge, this information is corrupted with noise (flipped with 0.001 probability). This makes it impossible to say with certainty whether a record belongs to a refugee or not.

The datasets closely follow the previous D4D challenge formats. However, we target a higher level of privacy protection, and subsequently, we do not publish data that allows the creation of "ego networks" by indicating caller and callee numbers.
Under these conditions, analysis of these datasets does not make it possible to say anything on individuals, but only allows aggregate results, based on regions.