Social Network Analysis: Getting and Marshalling Data

The webinar will begin at 3pm

You now have a menu in the top right corner of your screen.

The red button with a white arrow allows you to expand and contract the webinar menu, in which you can write questions/comments.

Feel free to type questions as we go, we will answer as many as we can at the end

We can't hear you.

Social Network Analysis: Getting and Marshalling Data

Dr Diarmuid McDonnell
UK Data Service
15 September 2020

Can you hear us?

Can you hear us?

If not:

- Check your volume, and that your speaker/headset is plugged in

- Click on audio to change to listening via phone.

- We are recording this webinar – we plan to put it on our website

New Forms of Data Training Series

Upcoming webinars:

- [Social Network Analysis: Techniques and Methods of Analysis](#) (29 September 2020)

Upcoming coding demonstrations:

- [Text Mining in Python](#) (02 – 30 September 2020)

Past webinars:

- [Social Network Analysis: Fundamental Concepts](#)

- [Text-Mining: Advanced Options](#)

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Why this training series?

Many who have seen the potential offered by network analysis have found it difficult to come to grips with the highly technical and mathematical language that necessarily characterises much of the discussion in the technical literature.

(Scott, 2017: 3)

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Refresher

What is Social Network Analysis?

Social Network Analysis (SNA) is a methodological and conceptual toolbox for the measurement, systematic description, and analysis of patterns in relational structures in the social world (Caiani, 2014).

A relation is a distinctive type of connection or tie between two entities (Wasserman & Faust, 1994).

Relations are the building blocks of networks, and thus SNA is concerned with and most appropriate for analyses of data capturing relations between units of analysis (Scott, 2017).

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Networks in a nutshell

A network – whether social, physical, biological etc – is constructed from two main building blocks (Owen-Smith, 2017):

1. The **entities** that are (or can be) connected in a network.
2. The **connections** that exist (or could exist) between entities.

Therefore a network is an aggregation or collection of these entities and their connections.

For example, a family tree is a network containing individuals (**entities**) that are related through some type of familial tie (**connection**).

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Example of social network
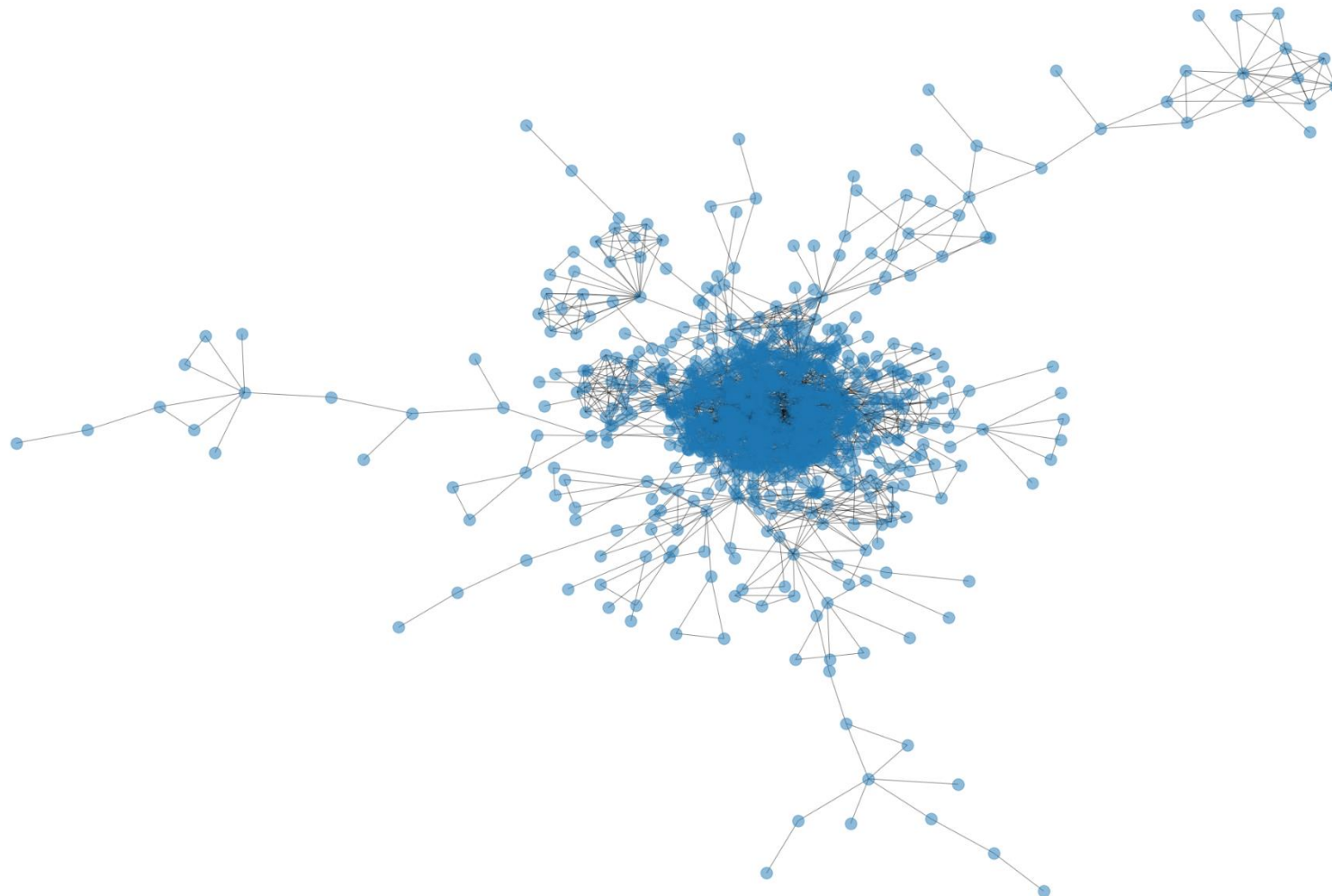
Understanding APIs

What is an API?

An Application Programming Interface (API) is:

…a set of functions and procedures allowing the creation of applications that access the features or data of an operating system, application, or other service (Oxford English Dictionary).

In essence: an API acts as an **intermediary** between software applications.

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API conceptualisation

Collecting and cleaning social network data:

Twitter

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What is Twitter?

Twitter is one of the world's most popular microblogging and social networking platforms.

Users can post (tweet) their own content, repost (retweet) and like the content of others, follow other users etc.

Twitter allows restricted access to the data it holds on the above activities through its API.

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Twitter API

The Twitter API allows programmatic access to the Twitter platform:

- Automated / scheduled activity ('bots')
- Requesting data

There are different levels of access (tiers) to the API:

- Standard
- Premium
- Enterprise
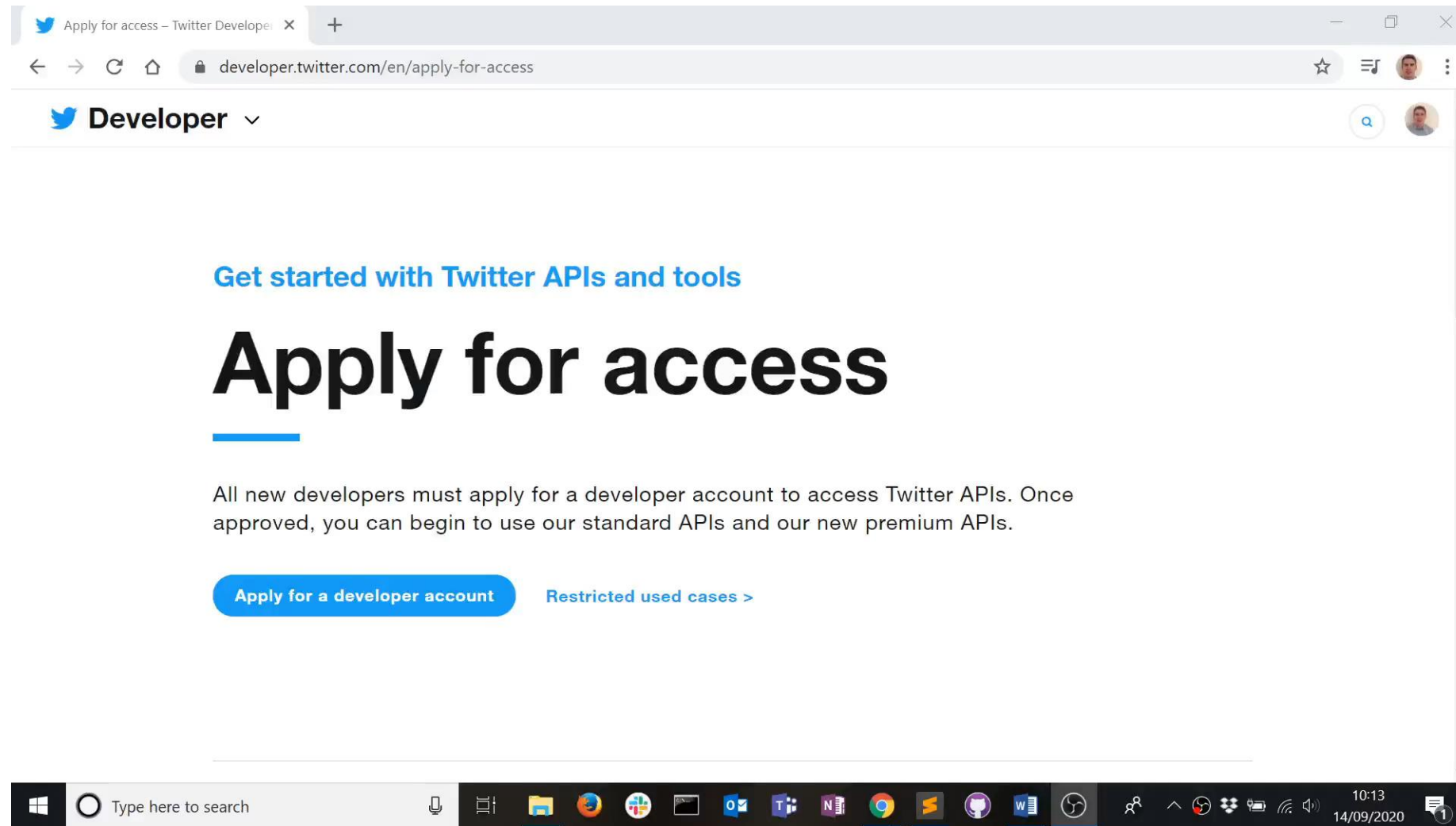
In terms of accessing data, the API provides a number of endpoints.

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Twitter API

Accessing the API involves a number of steps:

1. Registration
2. Creating a project and application(s)
3. Generating and saving access and authentication keys associated with you and the project/application(s)
4. Selecting level of access (tier)
5. Requesting data!

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Twitter API: Registration

Twitter API: Demo

See [Jupyter Notebook](#) for code demonstration

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Converting to social network data: Charity trustees

Charity data: Demo

See Jupyter Notebook for code demonstration

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Questions

Questions

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Further resources and help

Repository: https://github.com/UKDataServiceOpen/new-forms-of-data

Youtube: https://www.youtube.com/user/UKDATASERVICE

Help: ukdataservice.ac.uk/help/

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