

DRAGONFLY

AFP GRAPH
ANALYTICS PLATFORM

10.55-11.40am

s22(1)(a)(ii)

s22(1)(a)(ii)

GRAPHWARE

OFFICIAL

s22(1)(a)(ii)

s22(1)(a)(ii)

s22(1)(a)(ii)



s22(1)(a)(ii)

s22(1)(a)(ii)

s22(1)(a)(ii)

for GraphAware AN/Z.

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982



AGENDA

- INTELLIGENCE IN 2024
- WHAT IS A GRAPH DATABASE?
- WHAT IS HUME?
- AUSTRALIAN FEDERAL POLICE'S GRAPH JOURNEY WITH DRAGONFLY
- DEMO OF HUME

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

INTELLIGENCE IN 2024

PC/ ANZPAA
POLICE CONFERENCE
»2024

EXCELLENT
COLLECTION;

INFORMATION
OVERLOAD

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982



GRAPHS CONNECT EVERYTHING.

PC/ANZPAA
POLICE CONFERENCE
»2024

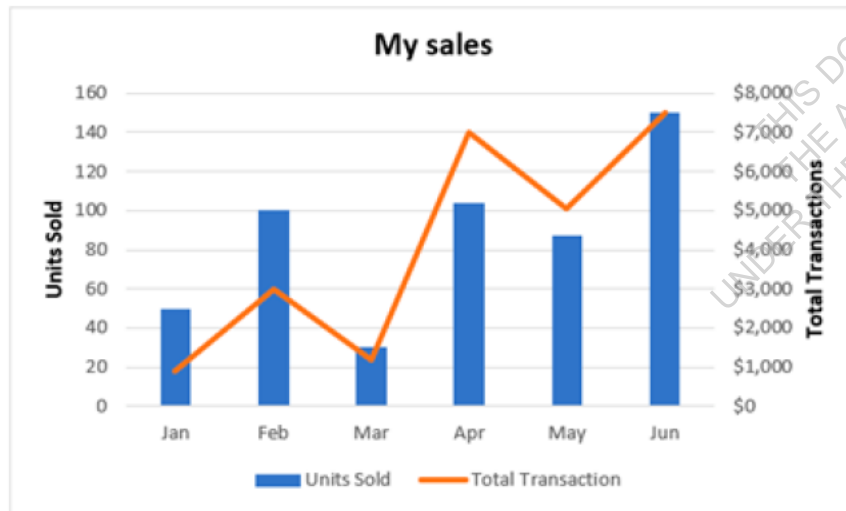
A GIANT LINK
CHART OF
EVERYTHING AN
ORGANISATION
HOLDS

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT

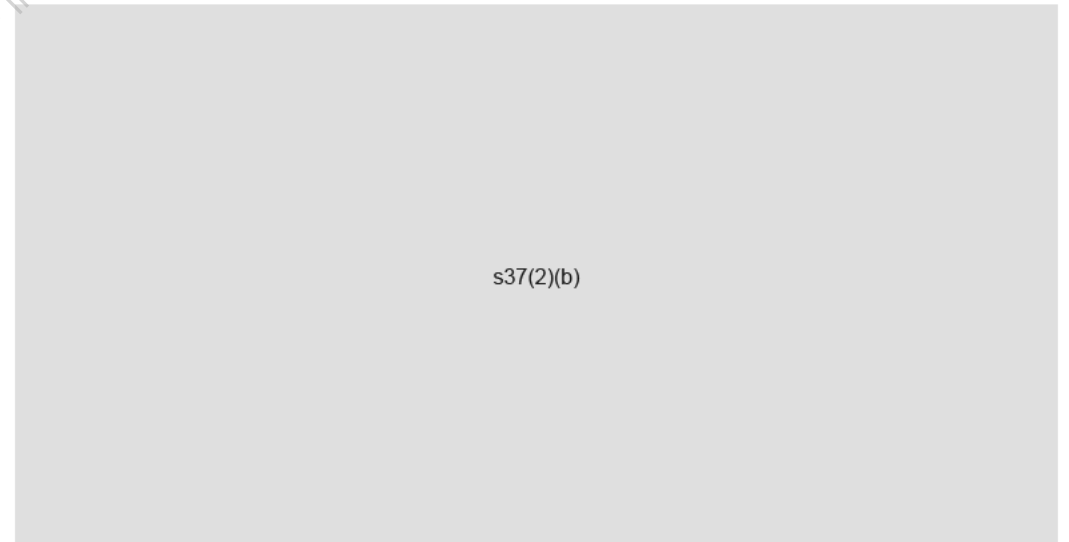


WHAT IS A GRAPH?

THIS IS A CHART



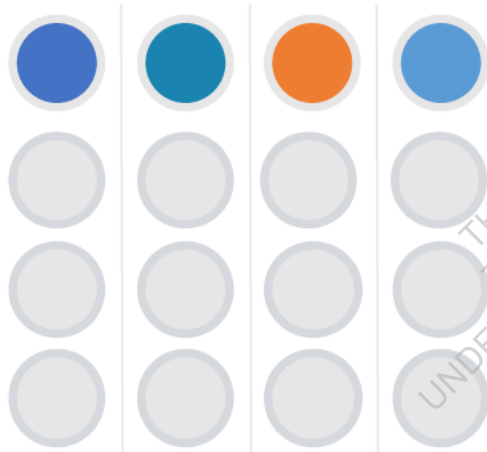
THIS IS A GRAPH



RELATIONAL DATABASE



Relational Database



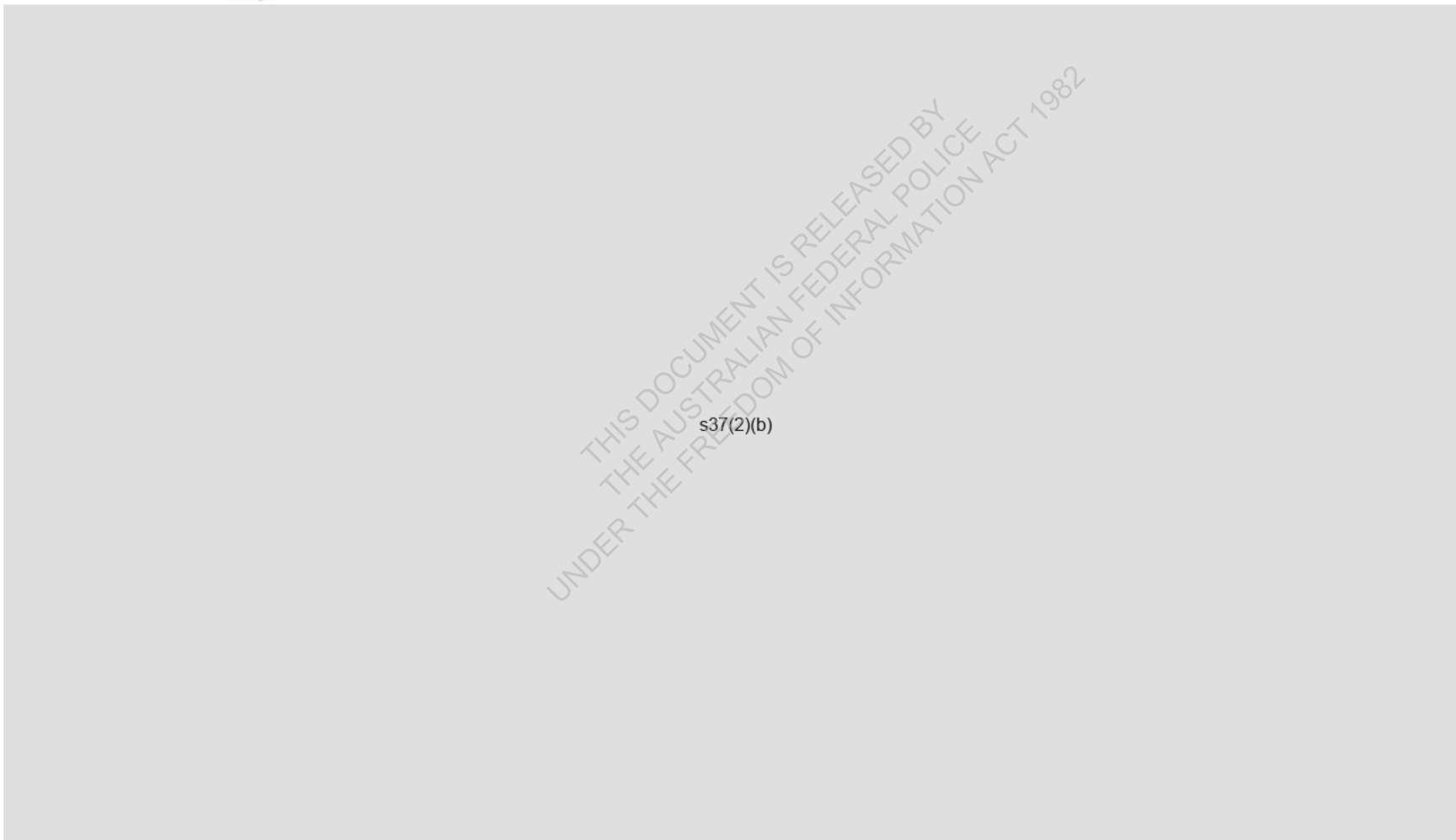
THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

Caller SIM	Callee SIM	Outgoing BTS	Incoming BTS	Timestamp	Call duration (sec)
0458685984	0488595496	12	365	2018-01-18 15:22:12	456
0458685984	0458685984	12	25	2018-01-18 22:24:12	35
0469875254	0498563201	879	567	2018-01-19 08:47:10	125
(...)	(...)	(...)	(...)	(...)	(...)



GRAPH DATABASE

PC/ANZPAA
POLICE CONFERENCE
»2024



THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

s37(2)(b)

GRAPH HAS HISTORY

GRAPHWARE HUME IS THE THIRD
GENERATION OF LINK ANALYSIS

“Link analysis procedures were used by officers... results confirmed the utility and potential value of these procedures.”

*Harper & Harris,
1975, The Application*

s37(2)(b)

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

s37(2)(b)

SYNTHESISE

- Hume Orchestra
- Entity Resolution
- Entity Extraction from Text
- Specialised Ingestion

ANALYSE

- Graph Powered
- Secure
- Geospatial and Temporal
- Entity 360 Action Boards

SPECIALISE

- Digital Forensics
- Offender Monitoring
- Suspect Candidate Nomination
- Criminal Asset Confiscation

DIGITAL FORENSICS

PC/ANZPAA
POLICE CONFERENCE
»2024

SINGLE PHONE ANALYSIS

MULTI-PHONE ANALYSIS

CONNECTIONS TO OTHER DATA
STORES



THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1989

CRIMINAL ASSET CONFISCATION

PC/ ANZPAA
POLICE CONFERENCE
»2024

FIND ASSETS HIDDEN IN
COMPLEX FAMILY AND
BUSINESS STRUCTURES.

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

s37(2)(b)



SUSPECT NOMINATION

FIND SUSPECTS FOR HIGH
VOLUME CRIMES

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

s37(2)(b)

CONSIDER THE MOST COMMON POLICING ANALYSES

- SHOW ME HOW PERSON X AND PERSON Y ARE INTERCONNECTED.
- SHOW ME HOW THIS GANG IS SOURCING THEIR FUNDS
- TELL ME THE ADDRESSES THIS PERSON MIGHT BE LOCATED AT
- SHOW ME THE COMMUNICATION EVENTS BETWEEN TWO INDIVIDUALS
- WHO ARE THE MOST INFLUENTIAL PARTIES WITHIN A CRIMINAL ORGANISATION?

THESE ARE QUESTIONS BEST ANSWERED USING GRAPHS.

WHAT IS DRAGONFLY?



DRAGONFLY IS THE AFP'S GRAPH ANALYTICS PLATFORM POWERED BY HUME.

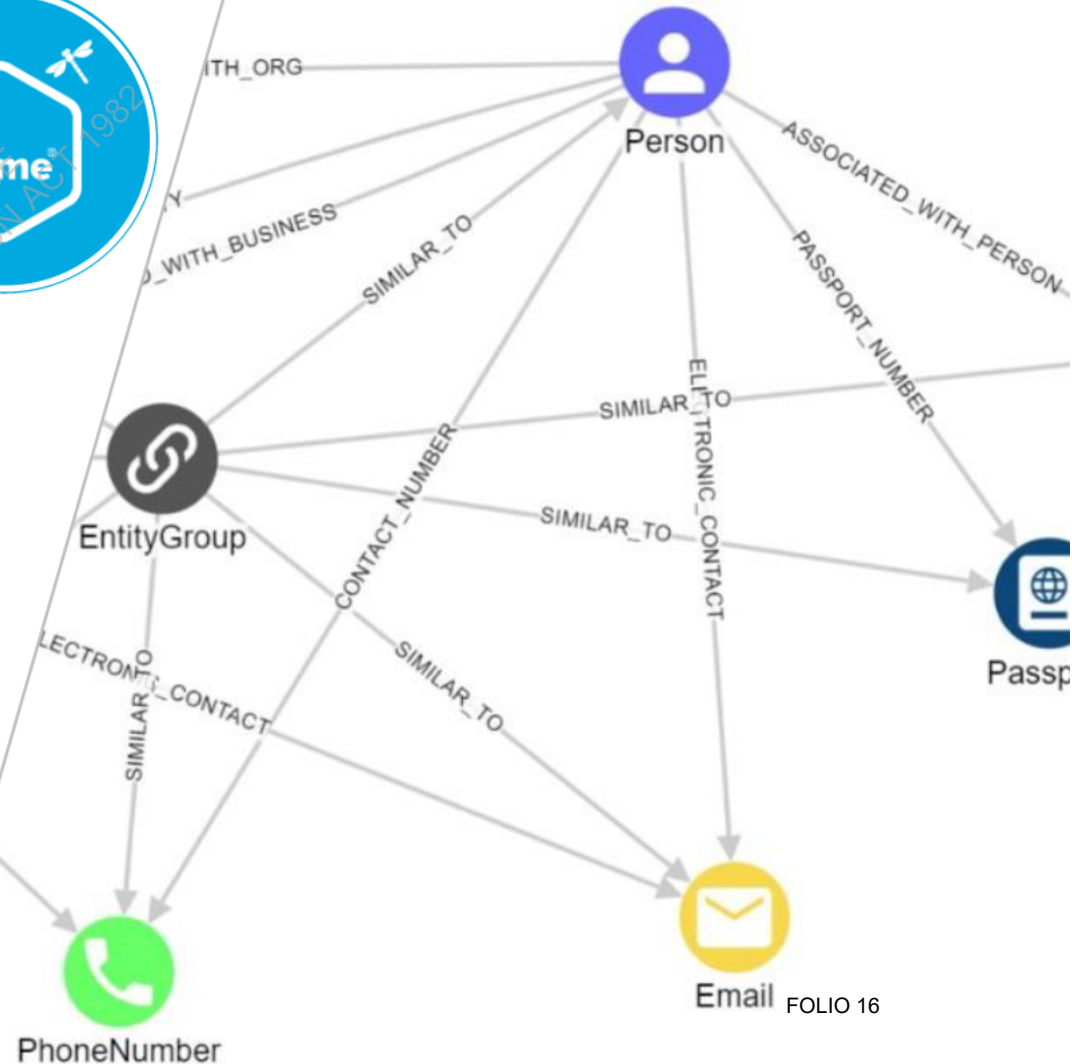
DRAGONFLY PUTS CONNECTED DATA INTO THE HANDS OF ANALYSTS, INVESTIGATORS AND FRONT-LINE OFFICERS

DRAGONFLY HUME

- Analytical tool capable of identifying relationships between disparate sets of data.
- Specifically finds connections between:
 - People
 - Objects
 - Locations
 - Events
- Dragonfly *is not* a repository. It is a tool to access data available in separate data 'buckets'.
- Dragonfly *is not* a replacement of other charting tools.
- **Where to look first.**

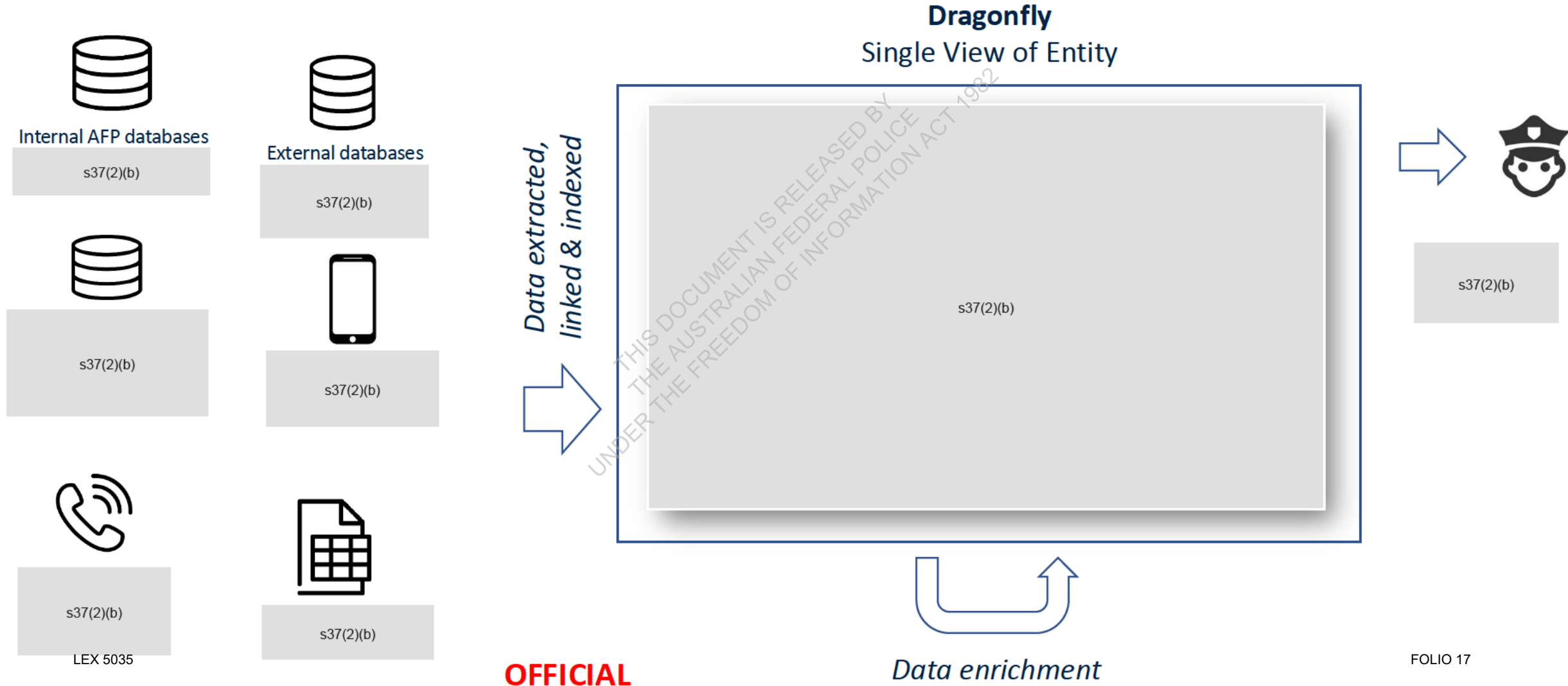
LEX 5035

OFFICIAL



THIS DOCUMENT IS RELEASED BY THE AUSTRALIAN FEDERAL POLICE UNDER THE FREEDOM OF INFORMATION ACT 1982

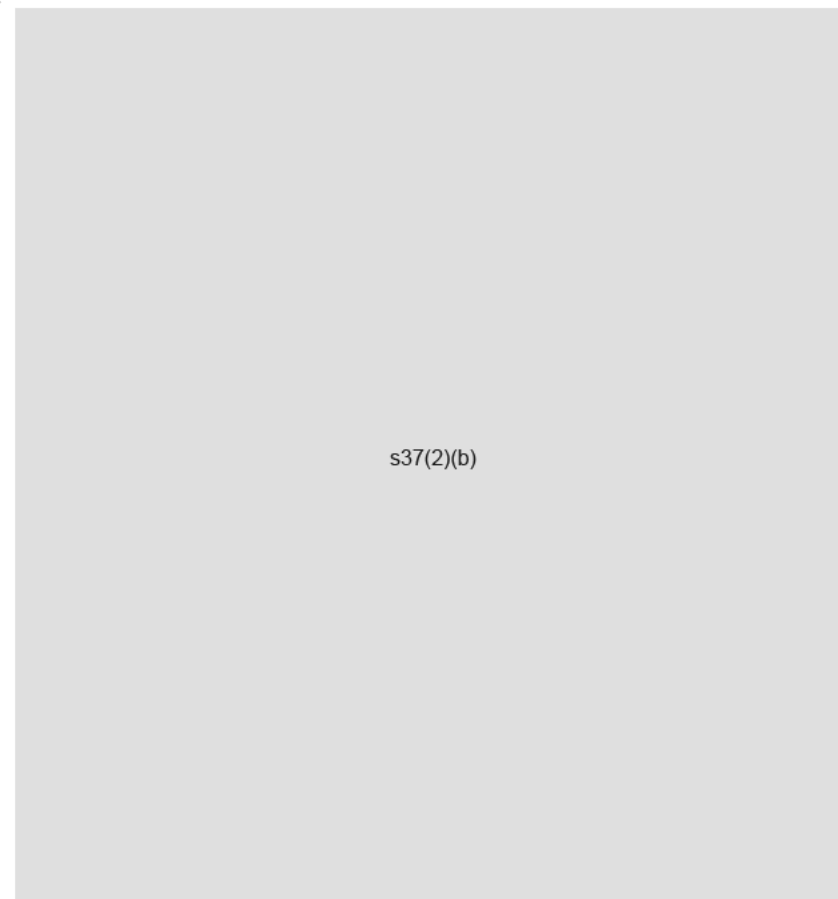
DRAGONFLY HUME





DRAGONFLY HUME

Dragonfly Analytical Output – High Office Holder Risk from Event





DRAGONFLY HUME

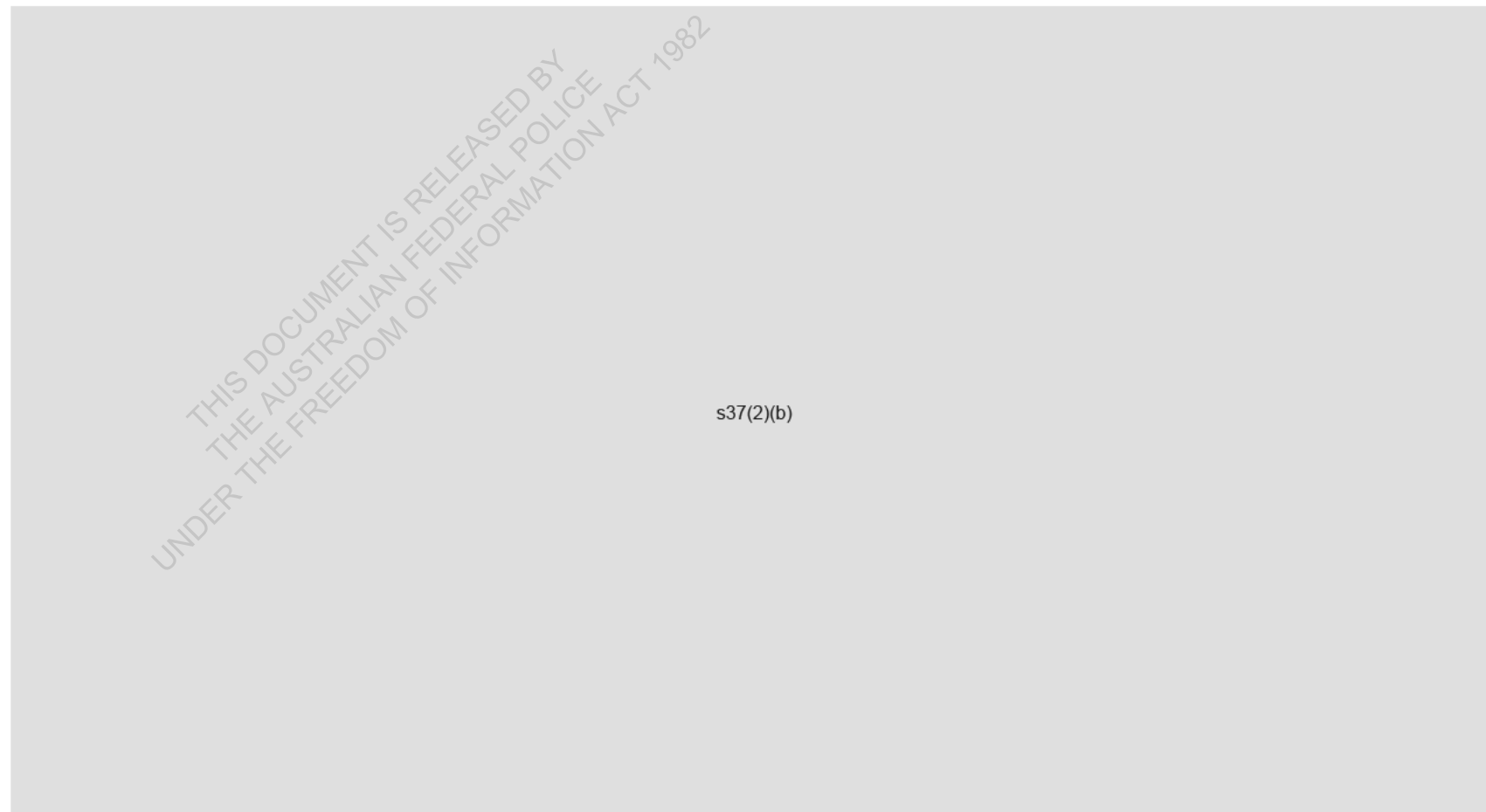
Named Entity Recognition

AFP members need to access and analyse both structured (i.e. PROMIS, excel spreadsheets) and unstructured data (i.e. documents, transcripts).

While structured data is easy to process, store, and search, unstructured data cannot be handled in the same way without complex processing to manipulate it.

Named Entity Recognition (NER) is one technique used for information extraction within unstructured text, with the purpose of identifying entities and classifying them into predefined categories (i.e. address, phone number etc).

Dragonfly has built an NER service that will fit into the current data ingestion pipeline to extract entities from unstructured text from any dataset that is fed into Dragonfly.



s37(2)(b)



DRAGONFLY HUME

Simple Search and Visualisation

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

s37(2)(b)



DRAGONFLY HUME

One Click Powerful Analysis

s37(2)(b)

THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982

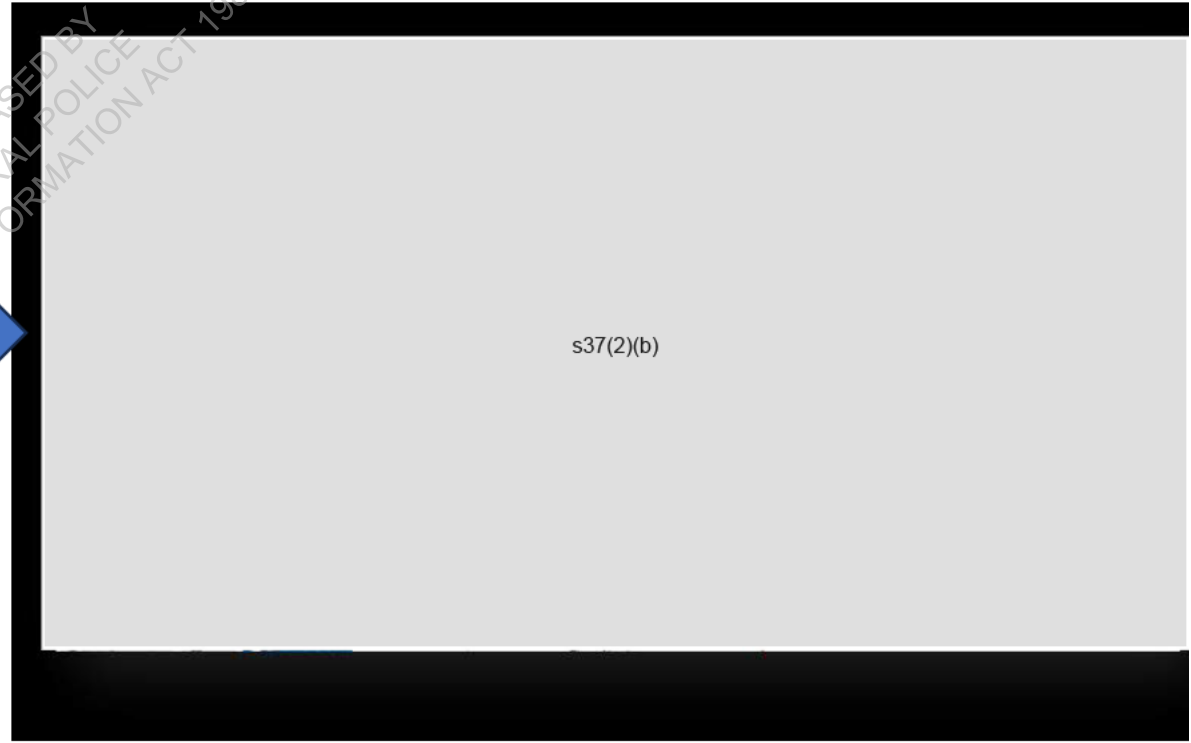
s37(2)(b)



FUTURE - INTEGRATION

ENTITY EXTRACTION FROM TEXT

Future – Entity Extraction from Documents



THIS DOCUMENT IS RELEASED BY
THE AUSTRALIAN FEDERAL POLICE
UNDER THE FREEDOM OF INFORMATION ACT 1982