



# Exploiting the Power of Unstructured Social Media Content in Homeland Security

The quantity and variety of social media content presents a number of challenges for those involved in homeland security. Arguably, the most challenging are the analytical problems.

Is the information up to date? Relevant or even correct? How can links and patterns be identified between seemingly unrelated data? And how should the potentially sensitive results be securely stored?

This eBook and white paper explores these challenges and addresses how to transform unstructured social media contents into actionable intelligence...

Download the  
white paper  
from [ipl.com](http://ipl.com)





## Manual Operations to Automated Processes...

While some police forces currently exploit data gathered from social media sources, this is typically a manual operation.

The analysis rapidly becomes stale with the arrival of further information. Often the analyst simply lacks the bandwidth and resources to spot patterns or links between the emerging data feeds.

If the extraction, structuring and analysis of this information could be achieved in an automated and timely manner, this would allow the full exploitation of the data and a targeted reaction to the unfolding events.

**Automate the Process with IP Discover...**





# IP Discover — Transforming Unstructured Data into Useful, Structured Knowledge

Social media content is often described as unstructured data. It is unstructured because the original structure of the posting or blog, e.g. the subject and meaning, is only obvious to the author or the participants in a social media thread.

To derive the original structure requires careful human-based analysis. This analysis is time-consuming and potentially error-prone; issues that are compounded by the sheer volume of social media content produced every second of every day.

It is obvious that organisations wishing to extract maximum value from social media content need automated solutions, ones that can be trusted to process the massive quantity of information without making mistakes.

**IP Discover ... helping you with data transformation**





## **IP Discover Transforming Data into Knowledge, where to Focus?**

With so many sources of social media data available, the first decision to make is where to focus.

To extract the greatest value from the data, we need to identify not just the immediately obvious information, but may need to combine it with alternative data sources, such as an organisation's own proprietary data.

Filtering techniques can then be applied to create a more reliable, accurate and focused set of data.

**IP Discover... helping you focus**

# IP Discover — Appropriate Architecture

Handling and storing the knowledge in an efficient, logical and secure manner is essential to the ways in which it can be analysed.

Social media content is inherently connected through different types of relationships, and it is by further analysing these complex links that new and refined knowledge can be attained.

Therefore, careful consideration of the type of database selected to store and process the data is required.

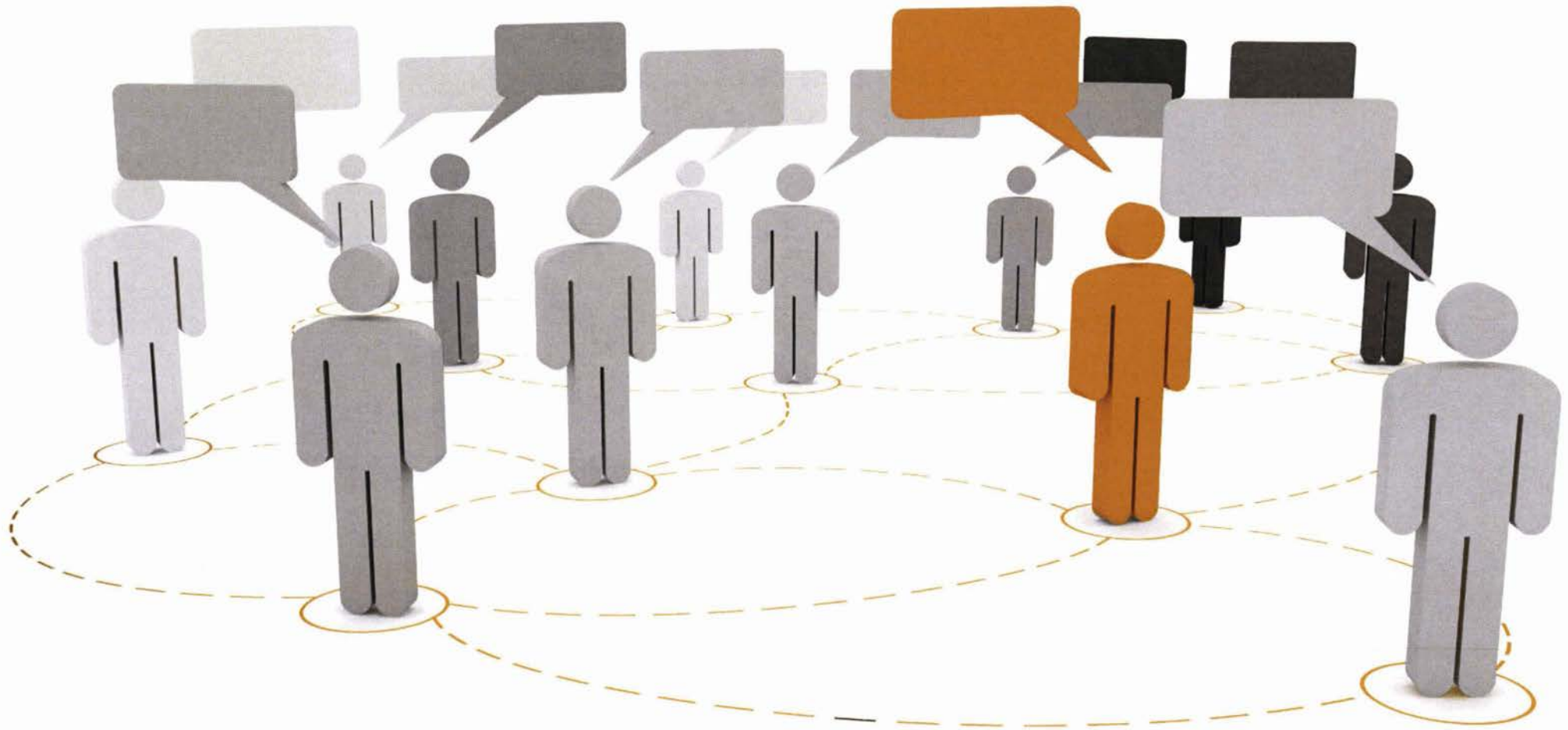
Performance, scalability and an ability to manage ad hoc data are key. These factors must also be combined with the desire to identify links and patterns.

**IP Discover... helping you get the most from your data**





# IP Discover — Turning Knowledge into Actionable Intelligence



For an organisation to take full advantage of knowledge, it often requires detailed analysis.

Doing so reveals hidden details, trends, patterns and relationships that may not be initially apparent. Transforming knowledge into relevant and usable intelligence helps an organisation's decision-maker decide on what to do next.

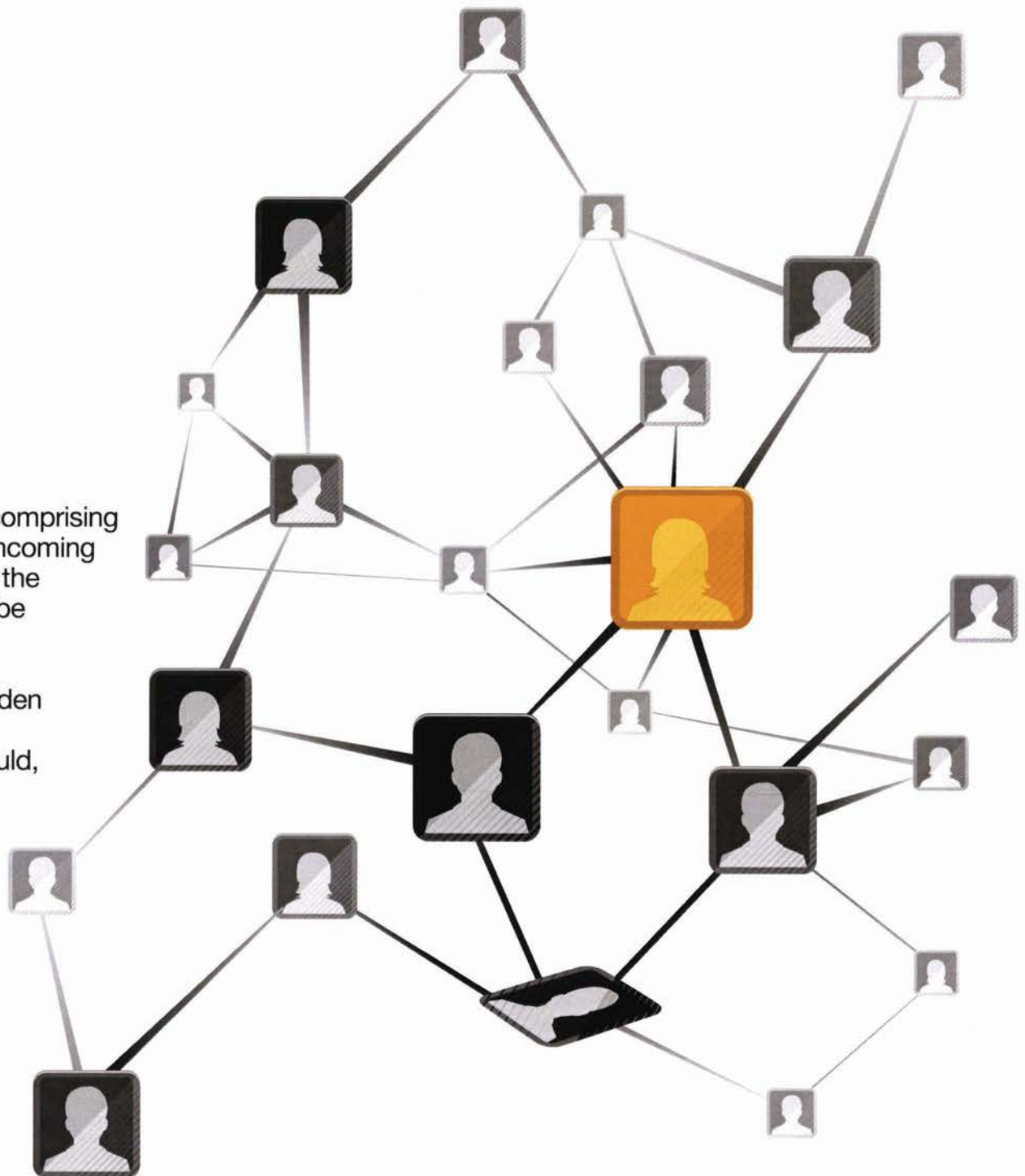
**IP Discover... helping you with actionable intelligence**

## IP Discover Identification of Hidden Relationships

Social media content provides network information comprising details of people and the links between them. If the incoming datasets contain identifiable people, then analysis of the social networks around events and individuals must be possible.

Mathematical techniques can be used to explore hidden relationships behind groups of people by identifying significant connections, trends and patterns. This could, in turn, result in an individual's influence within the network being revealed.

**IP Discover... helping you identify influencers in networked groups**



# IP Discover Geographic Analysis

Public demonstrations are often associated with movement. The route may be pre-planned and fixed, or as in the 2011 summer riots, constantly changing and hence presenting a difficult challenge for the police to monitor.

Group movements and trends detected during a live event can be derived by analysing geographically tagged social media data.

IP Discover... helping you detect movements and trends







# IP Discover Derived Intelligence

To help decision-makers respond quickly to incidents or events, they can't be overwhelmed by detail. Derived intelligence needs to be presented in appropriate, customisable and useful ways.

Locations of individuals, groups or niches, and tracking their movements, are obvious candidates for geospatial visualisation using specialist mapping tools. Helping you understand the identity of an individual, quickly, on a map, however complex the network.

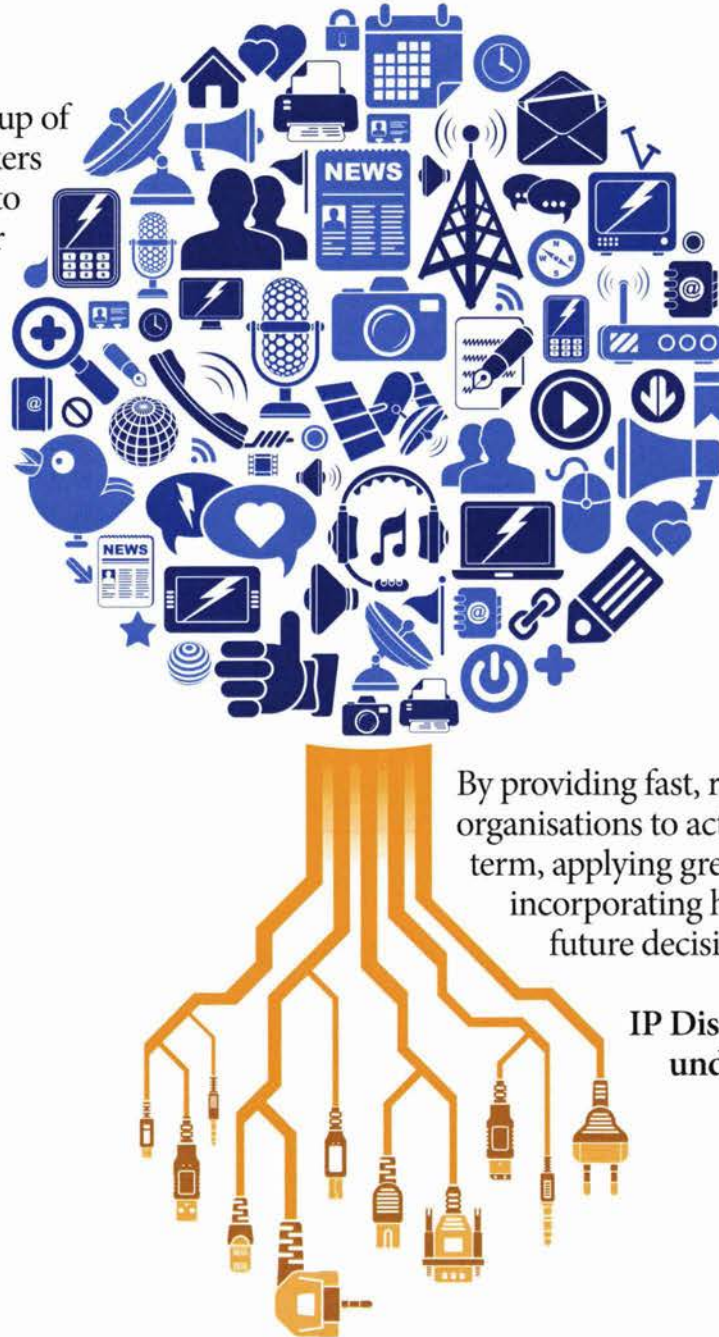
**IP Discover... helping you visualise social  
network data**



## IP Discover – Obtaining Deeper Intelligence

Once it is established a group of individuals are linked, decision-makers should be able to analyse deeper into their data sets by seeking out further intelligence, helping inform a new or complex decision.

How?



By providing fast, real-time intelligence for organisations to act on. And over the longer-term, applying greater detailed analysis by incorporating historical datasets to aid future decisions.

IP Discover... helping you better understand your data





# Exploiting the Power of Unstructured Social Media Content in Homeland Security

IP Discover is a dedicated technology framework that provides security professionals with real-time information and analysis from publicly available social media networks and news feeds relating to people, events and locations.

**IPL – welcome to the world of Intelligent Business**



**IPL Limited** | Eveleigh House, Grove St. Bath, BA1 5LR  
Tel: +44 (0)1225 475000 | [info@ipl.com](mailto:info@ipl.com) | [ipl.com](http://ipl.com)