## Paradigm™ Packages

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<th>Packages</th>
<th>Data Feeds</th>
<th>Services</th>
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<td>CORE</td>
<td>Local File Systems, Text, PDF, Office Docs, HTML</td>
<td>Trending, Search Tools, Entity Extraction/Resolution, Relationship Extraction, Concept Extraction, Clustering, Profiling and Alerting, Geospatial Profiling/Alerting, Geospatial Tagging, Temporal Analysis</td>
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<tr>
<td>Multi-Media</td>
<td>Video, Audio, Images</td>
<td>Video &amp; Audio Analytics, Face Detection, Image Indexing, Audio Profiling, Audio Entity Extraction</td>
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<tr>
<td>Language Support</td>
<td>Core Data Feeds, Multi-Media Add-on Pack, Harvestr* Package</td>
<td>Language Identification, Language Translation, Natural Language Processing</td>
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## Paradigm™ Subscription Support

- 5 Named Users (additional users negotiated at award)
- 40 hrs Technical Support/Installation/Training
- Help-desk Support (7am to 7pm), M-F, Excluding 10 Federal Holidays
- On-site Training Support: 5-Analysis, 8-hour Class and/or 5-Administrators, 4-hour Class
- Subject Expertise Support (Product Developer, Analyst, Administrator) – 40 hrs Minimum
- Customer Specific Requirements – Priority Features Added into Product
- Travel outside of the Washington metropolitan area (50-mile radius) will require additional time and travel costs in support of services

* Data feeds/pricing finalized in license agreement or Customer provides data access to data sources.

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Paradigm™ product information. Please contact us for additional details.
Paradigm is a big data processing and analysis framework for text, audio and video.

The Challenge
The explosion of data, both open source (e.g., social media, blogs, chats, audio and video) and customer source, requires constant innovation in analytic methodology to keep up with the expanding volume. Through analysis, mission understanding, and applied intelligence tradecraft, the rapidly changing data needs to be fused to determine trends and potential threats.

Our Solution
Paradigm integrates smart, targeted analysis services (e.g., alerting, trending, and temporal analysis) into our workflows, moving us one step closer to predicting future events. Our unique, automated ingestion process eliminates manual indexing and tagging, allowing the user to immediately dive into their value add analytics and assessment responsibilities.

Paradigm’s architecture contains the following major components.

Ingestion: Assemble data, such as intelligence reports, open source news, user generated data, videos, podcasts and social media from customer provided or approved/vetted data vendors in English and native language.

Analysis: Perform analytics on the data (e.g., entity extraction, location, relationship identification, name/entity resolution, face detection and indexing in English and native language).

Web Services: Display the results of the analytics and user requested analytics to a user interface or other processing system through standard web services.

Big Data Analysis
Northrop Grumman provides automated and user driven analytics in a collaborative, multi-int environment, creating valuable intelligence from massive and ever growing diverse data sources. Paradigm applies multi-media, big data search and analysis tools to unstructured text, video and audio data. Our tool performs a variety of functions:

Entity extraction: names, titles, locations, dates, organizations, addresses, identifiers, money, etc.

Concept extraction: popular parts of speech associated with an entity in a given data set or search results.

Location Tagging: latitude/longitude, confidence and features from all locations discussed within unstructured text.

Integration of multiple search engine types: text, audio, geospatial and image.

Alert Creation based on user defined profiles: area of interest, keywords, phrases within audio data, or entity actions.

Examination of temporal relationships: relevant intelligence/relationships when compared with current/new data.

Automated analytics: trends and hot topics to anticipate events.

Finding and Visualizing Relationships
Paradigm is an integrated all-media analysis capability that provides analysts with a common interface regardless of the media being searched and analyzed. It brings together the best mix of innovation, open source, and COTS software to provide enterprise-level intelligence.