

OPIR Ground Architecture

NDP Research – Tech Note

March 2011

OPIR Ground Architecture

Tech Note Number	NDP-TN-104
Problem	Achieving streamlined data processing and distribution for space based (IR) sensors, maintaining low-latency and security requirements.
Description	NDP possesses the requisite experience and personnel to provide rapid and comprehensive architecture and implementation details for sensor ground system data processing, distribution and product sharing. Our team includes selected experts in network, security, software, and systems engineering/architecture with ground system knowledge.
Core Technology	NDP solutions leverage advanced networking and software technology, including: reliable multicast and unicast protocols for high-latency (OCONUS) links; evolutionary comsec devices, including IP-based crypto; and various web-services based software paradigms for maximum interoperability.
Benefit	<p>Our customers see improved reliability, performance, security, monitoring, and interoperability of their data processing and dissemination systems. Solutions are tailored for individual program needs, while retaining/improving data-sharing via contemporary service-oriented/web-based interfaces.</p> <p>NDP strives to create a true net-centric environment where the secure and reliable inter-agency dissemination of space-based sensor data and products just works. Data products and interfaces are easily interconnected, well documented, and secure. New systems can be integrated and leverage existing systems without redesign or modification.</p>
Market	Our focus is on Defense and Intel agencies with space-based assets, but the techniques and technologies apply in other sectors with stringent reliability, latency, and security requirements.
Technology Readiness Level	7. System prototype demonstration in an operational environment (various components/technology mentioned at other TRL).
Keywords	OPIR, data sharing, data distribution, ground systems, cybersecurity, net-centric design, information assurance (IA), service oriented architecture (SOA), open architecture, web-services, CCSDS.

OPIR Ground Architecture

NDP Research – Tech Note

March 2011

About NDP

NDP designs and deploys complex computer systems and networks. We also assure that these systems and networks can operate securely in cyberspace. By integrating sound net-centric designs into our customer systems, we enable them to gain a competitive advantage that translates to mission effectiveness. We primarily support DoD , Intel and Federal customers and currently expanding our offerings to the commercial and academic markets. We are a customer-centric, technology-centric and people-centric company.

This paper is for informational purposes only. NDP LLC disclaims all liability, including liability for infringement of any proprietary rights, relating to use of information in this paper. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted herein.

NDP, LLC | 2575 Pearl Street, Suite 220 | Boulder CO 80302 | Phone: (303) 339-0853 | Fax: (303) 325-5136

Learn more at ndpgroup.com

© 2011 NDP, LLC