



# NoVA CAD2CAD Exchange



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## Background

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The Fire Departments of the City of Alexandria, Arlington County and Fairfax County, signatories of the Northern Virginia (NOVA) Emergency Services Mutual Response Memorandum of Agreement, have been operating as one department in utilization of resources since the early 1970s. For many years, the Computer Aided Dispatch (CAD) systems of the NoVA Fire Departments maintained other jurisdiction's units in their own CAD systems and recommended NoVA units for dispatch based upon a 'closest unit' prediction. This method assumed, with no better information available, that each unit was available and at its assigned station at all times. In order to make use of other NoVA units, the requesting jurisdiction had to confirm unit availability and initiate the dispatch process. All requests for resources were handled verbally by dedicated ring down telephone lines with one jurisdiction's Communication Center having to call another to determine resource availability.

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## Solution

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The CAD2CAD Exchange allows the sharing of non-sensitive, fire Computer Aided Dispatch (CAD) data between the operational CAD systems of Alexandria, Arlington, and Fairfax. By providing the real-time status of fire and EMS units and allowing jurisdictions to directly request resources from one another for mutual aid response, the **Unit Status** and **Request for Resource** services have significantly reduced the time needed to dispatch resources and have improved incident response times and service to the community. Since its activation, the jurisdictions participating in the CAD2CAD Exchange have reported a decrease in emergency response time of up to 50%, from approximately 4 to 5 minutes down to approximately 2 to 4 minutes. For patients requiring immediate care for a life-threatening condition or for fast-spreading structure fires, the improvement in response time results in lives and property saved. CAD2CAD complies with emerging regional and national data sharing standards, thereby allowing for the inclusion of other regional partners as future grant funding permits. This real-time data exchange represents a technology integration success and a long sought-after milestone in the operations of 911 dispatch. Since implementation, CAD2CAD has been awarded the Virginia Governor's Technology Award for Cross-Boundary Collaboration and the Best of NIEM Award for innovative use of National Information Exchange Model standards for data exchange.

The CAD2CAD Exchange is supported by the NCR Interoperable Communications Infrastructure. "Phase 2" enhancements to the exchange will add unit location awareness, expanded incident details, and notification/ broadcast capabilities and actions.

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## Timeline

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Date	Grant	Phase	Milestone
2007	VA PSIC	Requirements	Stakeholders establish requirements for the Exchange
2007		Design	As-Is and To-Be Process Flows created Technical Artifacts created (XML Schemas, WSDLs)**
2008-2010		Develop	Developed, Tested, and Integrated the CAD2CAD Exchange
2010		Deploy	CAD2CAD Exchange Operational Pilot deployed
2010-present	UASI FY09 & FY10	Operations	Maintenance and Operations of the CAD2CAD Exchange
2011	UASI FY09	Requirements	Stakeholders establish requirements for Phase 2 enhancements

\*\*To view the following Technical Artifacts, please see <http://www.ncrnet.us/cad-exchange>:

Charter; Process Flows; Vendor Requirements; WSDLs; Sample Messages; Test Plan; Standard Operating Procedures

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## Essential Components

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1. **Project team** - Chiefs and executives work tirelessly to maintain support and funding; jurisdiction and project personnel provide top-quality management; CAD Vendors and project developers work collaboratively in support of project success.
2. **Governance** - An Operations Plan, Standard Operating Procedures, and a CAD2CAD Customer Portal provide a solid business framework for the technical operations of the Exchange. ([www.ncrnet.us/cad2cadportal](http://www.ncrnet.us/cad2cadportal))
3. **IT Service Support** - Comprehensive Incident Management and Change Management processes are defined across multiple jurisdictional, application, and infrastructure entities.