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End-to-End Houston Emergency System Performance and Process Assessment

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Executive Summary

The City of Houston began to consolidate its public safety emergency systems in September 2000 when the City Council approved a lease/purchase agreement formalizing the creation of the Houston Emergency Center (HEC) facility. This consolidation was part of Mayor Brown's management improvement initiatives in 1998¹. The facility was designed to house the personnel and some, but not all, of the systems that supported the Houston Police Department (HPD), Houston Fire Department (HFD), and Emergency Medical Service (EMS) call takers and dispatchers operations. The Computer Aided Dispatch (CAD) system was one of the systems located in the HEC facility that supported common and shared call taking and dispatching operations. The new CAD was acquired through an upgrade to the existing HPD CAD system. This new system replaced both the HPD and HFD CAD systems and provided interfaces to external systems including the Greater Harris County 911 emergency network, the mobile data terminals (MDTs), and HPD Record Management System (RMS).

The CAD has experienced several major outages prior to and since system acceptance. These outages have led to concerns with the performance of this new system. The City of Houston executed a contract with The MITRE Corporation to conduct an end-to-end performance and process assessment of the new system. The scope of The MITRE Corporation effort was to analyze the performance and processes of the public safety data systems located at the HEC. The other data and radio systems were not included in the contract. The MITRE Corporation assessed the following:

- Existing contracts and other documents that defined system performance and whether these performance requirements were met.
- Technical design of the system and overall end-to-end performance.
- Existing processes that support the system performance.
- Technical solutions and engineering processes that were needed to improve performance.

The team assessed the report which initially described the new call taker and dispatcher operations written by Arthur Andersen in 2002. Arthur Andersen was engaged by the City of Houston to provide a Technology/Management Plan for the new consolidated Houston Emergency Center. The principal purpose of this engagement was to prepare an organization structure, combining the related organizations in a unified command concept, and to prepare a budget¹. The plan showed the need for a new system to support the recommended consolidated operations. The decision was made not to replace all of the voice, data, network and computer systems at once. Instead, based on budget and other constraints, the decision was made to upgrade the central components,

¹ Houston Emergency Center Technology Management Plan, 26 March 2002.

