

MASTERS DEGREE DEFENSE  
COMPUTER SCIENCE DEPARTMENT

**Data Management – Bridging the Gap between Legacy and  
Modern Application Systems**

By

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With the changing technology computer systems have evolved so much from what they were a few decades ago. With the changing systems, the software and the applications that are used on those systems have evolved at a logarithmic scale as well. The fundamental concepts for the architecture of the machines hasn't changed much but when it comes to the area of applications development we have invented technologies that were not even dreamed of in earlier years. As we move in to the future several technologies and applications tend to become obsolete. A legacy system is one of those systems or application programs that continue to be used because the organizations do not want to replace or redesign it. System evolution most often implies the integration of legacy components, such as databases, with newly developed ones, leading to mixed architectures that suffer from severe heterogeneity problems. In this thesis we look into a methodology of bridging the gap between a legacy system and a modern applications system so that the business applications can still leverage from the processes that are embedded in the code and the design of the legacy system. We compared two approaches “Cold Turkey” and “Chicken Little” which were researched under DARWIN project at the University of California, Berkeley [Darwin, 1991] on migration of Legacy systems. We also implemented the “Chicken Little” approach for the wrapper design. We were able to successfully build a database wrapper for a legacy system to transform, verify, validate and massage data without disturbing the fundamental business logic behind this application.

Date: Tuesday, December 4, 2007

Time: 1:45 – 2:45 PM

Location: 8-48 Computer Science Conference Room

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