



Poseidon House
Castle Park
Cambridge CB3 0RD
United Kingdom

TELEPHONE:
INTERNATIONAL:
FAX:
E-MAIL:

Cambridge (01223) 515010
+44 1223 515010
+44 1223 359779
apm@ansa.co.uk

ANSA Phase III

The Application and Management of Distributed Meta-Information

Mark Madsen & Ben Crawford

Abstract

Diversity is the norm in complex distributed systems, which must cope with that diversity by implementing appropriate strategies. The difficulties created by the need for management of that diversity are themselves diverse, but are typically caused by the need for different components of the system to communicate knowledge effectively. This gives rise to the need for distributed system components to store meta-information about themselves, their activities, and the information which they manage. This meta-information must then itself be managed according to a coherent and consistent strategy.

In general, no one management strategy for the gathering, maintenance, and communication of meta-information is adequate for all situations. However, a number of strategies have been explored in different contexts which range from purely subject based applications to general knowledge management system architectures.

This document explores the situations that can benefit from the application of meta-information based solution strategies, the problems that are encountered in the use of meta-information, and the kinds of methods used for meta-information management. In addition, a selection of model architectures for meta-information that can be embedded within the ANSA model are developed and their strengths and weaknesses subjected to analysis.

APM.1409.00.03

Draft

11th April 1995

Technical Report

Distribution:

Supersedes:

Superseded by:

