Case-based reasoning (CBR) is defined as "a problem-solving paradigm that adapts stored problem solutions — or cases — to solve new problems specified by a user." CBR is applicable to a wide range of classification and construction tasks. It is particularly useful in tasks where a formal set of rules for generating solutions is difficult to obtain, but examples of correct solutions to similar problems are readily available.

Inference Corporation, El Segundo, California has introduced a stand-alone commercial software product based on CBR. Known as CBR Express™, it incorporates technology originally developed by Inference in work on the Advanced Software Development Workstation (ASDW) for Johnson Space Center (JSC). Shown below are the three members of the company's original CBR design team, from left, Elizabeth Ralston, Daniel Lee and David Lee.

The commercial CBR Express that emerged as a spinoff from the ASDW project is used as a "help desk" for customer support, enabling reuse of existing information when necessary. It has been adopted by a number of companies, among them American Airlines, GTE Corporation and Nippon Steel. An example of its utility: if American Airlines' reservation system software did not work, CBR Express would solve the problem by identifying similar problems in its database; essentially it classifies a given problem situation on the basis of past problems.

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