

Research & Development – Software Development

The classification of computer software development as R&D has long been controversial. The major issues have revolved around:

- Applying the *innovation or high levels of technical risk* requirement to a process that differs from the classic scientific method;
- Identifying *innovation* in a fast paced industry;
- Distinguishing routine development from software R&D.

To be claimed as R&D, the development must have *systematic, investigative and experimental* activities. It is expected that they are to a planned, logical sequence with detailed records being maintained. Experimentation must occur in a series of tests to test a theory or discover something unknown. Problems need to be identified and investigated.

For software development to be eligible according to the *high levels of technical risk test*, there has to be significant uncertainty about resolution of a technical problem on the basis of current knowledge or experience. Uncertainty arises when the solution is not readily clear to appropriately skilled and knowledgeable software developers after they have analysed the problem using generally known software development techniques. A solution to the problem can only be found by a program of experimentation in which various possible solutions are tried.

Software projects deemed eligible according to the *innovation test* are either novel in application or have some novel aspect in the way they function. Novelty is not a matter of a new or different feature in software, but rather a question of what original thinking or new idea has been introduced. New features may provide evidence of innovation, but need to be linked to the new idea or original thinking that underpins them. Projects that have code differing from commercially available software but perform the same function are unlikely to be considered novel.

There are other risks associated with software development that do not fill the high level of technical risk requirement. These include: lack of suitable expertise, difficulties in project management, underestimation of times or costs, shortage of suitable staff or users changing the technical requirements. System uncertainty does not justify a claim for development of entire system when the uncertainty only affects part of a system.

Activities of a routine nature that are not considered to be systematic, investigative or experimental include: data migration between systems, de-bugging, adaptation of existing software, preparation of user documentation, system maintenance or adding minor user functionality to existing applications. An upgrade or change to an existing program/system can be R&D if it meets the definition of R&D in it's own right.

For computer software activities to be eligible as systematic, investigative and experimental activities, they must be carried out for the purposes of sale, license, rent or hire to two or more non-associates of the company. This is generally referred to as the multiple sale requirement. If no sales have yet been made, there must be evidence of an intention to sell or license the software.

If you have any questions, or would like further information please contact Robyn Tyler at SRJ on (07) 3490 9988.