

Professional Engineers and Geoscientists of Newfoundland & Labrador

SOFTWARE ENGINEERING COMMITTEE

Guideline for the Use of Computer Software Tools by Professional Engineers and Geoscientists

Preamble

A Committee of PEG has prepared and Council has approved this position paper to provide a guideline to the profession in the use of computer programs in the practice of professional engineering and geoscience.

The position paper is a guideline for the use of computer programs in engineering and geoscience work that is considered reasonably necessary for the protection of the public. The guideline is strongly recommended but is not considered mandatory by the Association.

Guideline

The practice of professional engineering and geoscience has become increasingly reliant on computers, and engineers and geoscientists use many computer programs that incorporate engineering and geoscience principles and matters. Many of these programs are based upon or include assumptions, limitations, interpretations or judgments on engineering and geoscience matters that were made by or on behalf of an engineer or geoscientist when the program was first developed. Therefore, it is often difficult to determine, just by using a program or by being given a description of its function, the engineering and geoscience principles it incorporates.

Members must have a suitable knowledge of the principles involved in the work being conducted, and are responsible for the appropriate application of these principles. When using computer programs to assist in this work, members should be aware of the engineering and geoscience principles and matters they include, and are responsible for the interpretation and correct application of the results provided by the programs.

Members are responsible for verifying that results obtained by using software are accurate and acceptable. Given the increasing flexibility of computer software, members should ensure that verification of the performance of the software exists to a professional standard. In the absence of such verification, a member should establish and conduct suitable tests to determine whether the software performs what it is required to do.