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INTELLECTUAL PROPERTY:
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USM CNC Editor
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USM CNC Editor

Introduction
- Post processor is required for converting machining data from Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) software to Computer Numerical Control (CNC) machine.
- Unfortunately, the post processor is quite expensive and can only be used by one user per computer at a time.
- Due to a high demand on CNC machining tasks, hence the machining data from CAD/CAM software have to be generated by a number of users in parallel.
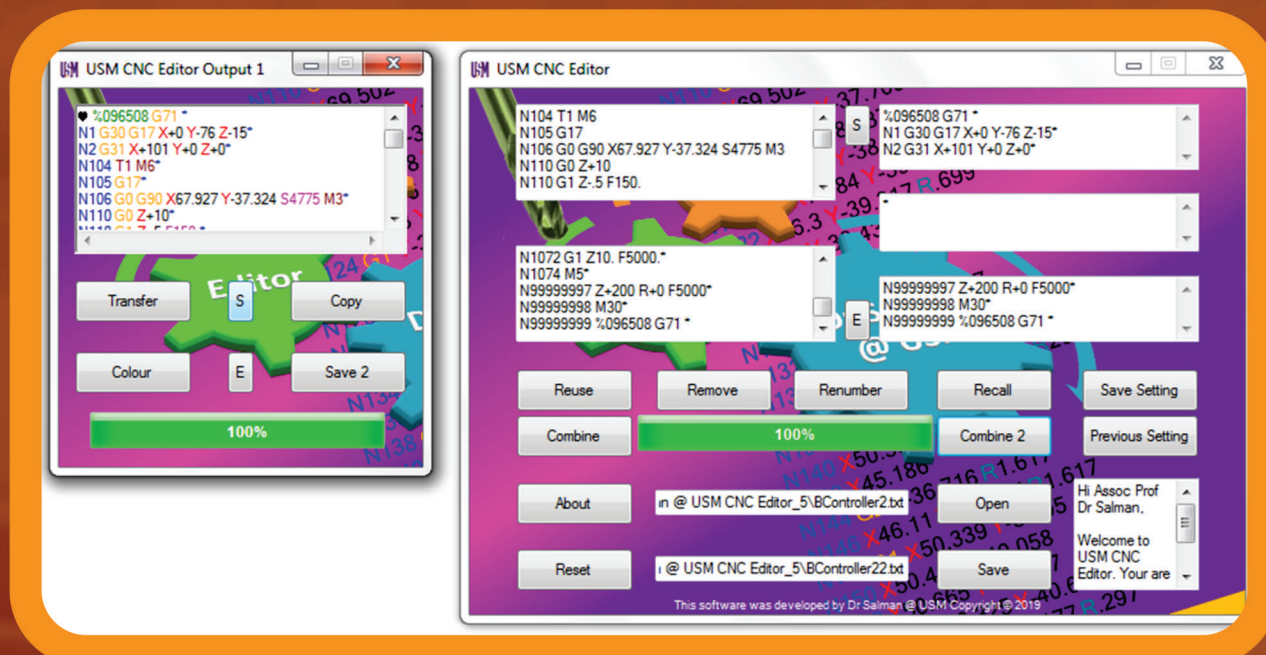
Problem Statement
- The main drawback is the post processor cannot be used by many users at the same time since it:
  (i) limits the number of users,
  (ii) requires a long lead time and
  (iii) involves high cost implication if more than one computer needs to be used concurrently.

Inventiveness and Novelty
- A new interface namely **USM CNC Editor** is invented as an alternative in order to overcome the main drawback by customizing its output based on CNC machine specification.
- Two new features are provided in **USM CNC Editor**:
  (i) "Quick generation of machining data format" and
 (ii) "Quick inspection of machining data format".
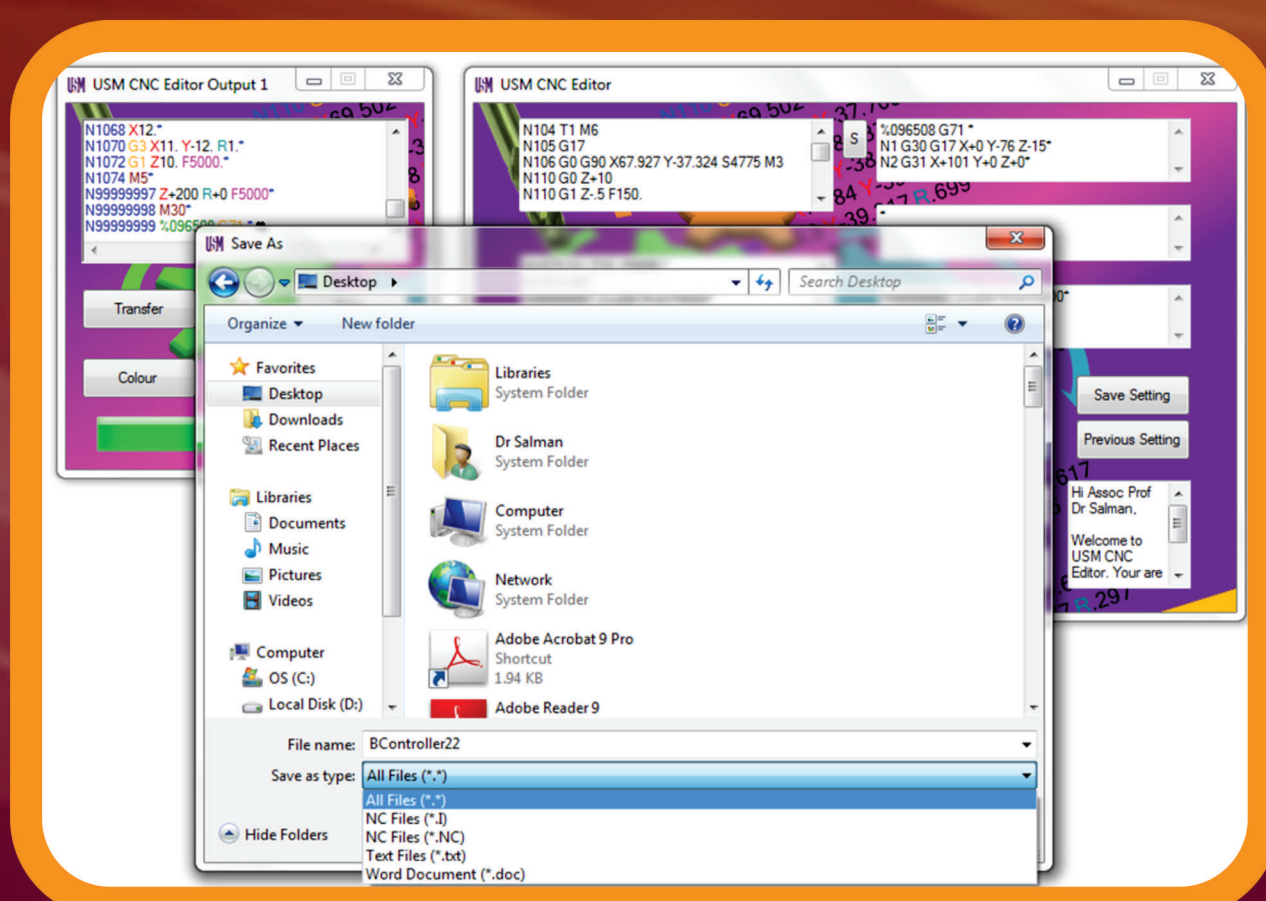
Intellectual Property Status
- **USM CNC Editor** has received a Copyright © 2019 (LY2019001878)

Usefulness and Application
- **USM CNC Editor** is used for editing the machining data in order to suit the CNC machine specification.
- **USM CNC Editor**:
  (i) allows unlimited users,
  (ii) shorten the lead time and
  (iii) reduce the cost implication in the process of converting machining data.
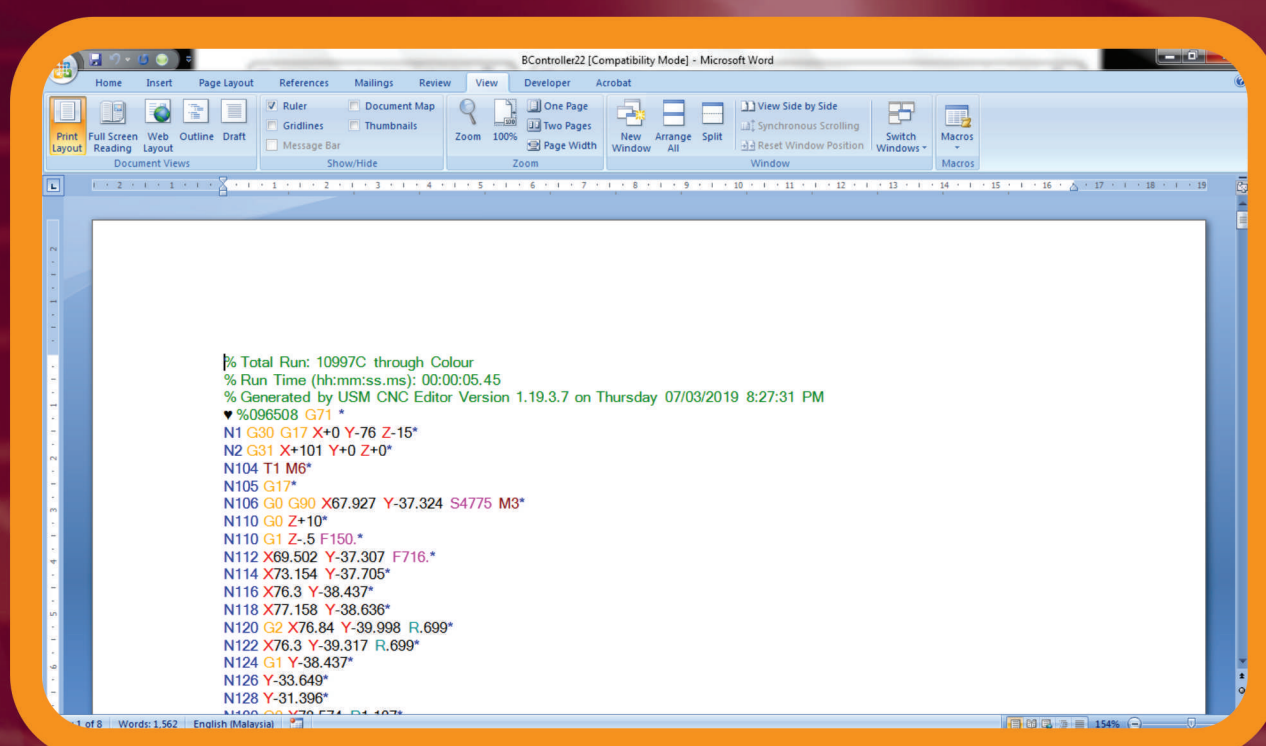
Status of Invention
- **USM CNC Editor** has been tested and used.

Commercial Potential
- **USM CNC Editor** has a very high potential to be marketed for CNC machining.

Potential Partners
- The potential partners are:
  (i) higher learning institutions,
  (ii) training centres and
  (iii) manufacturing industries which are related to CNC machining.

Knowledge Management (Grant/Publication/etc)
- Special thanks to Universiti Sains Malaysia for supporting this research project under the Research University Grant (Reference No: 814247).
- Related Publications in Scopus are as follows:
  [1] A Rule Based Method to Auto-recognize Fillet Features of B-Rep Mill Parts, Engineering Applications for New Materials and Technologies. Advanced Structured Materials, Vol 85. Springer, Cham, 105-114, 2018.
  [2] Validation of auto-generated material removal volume for regular form milling part, IOP Conference Series: Materials Science and Engineering, 429, 2018.

Impact of the Product
- Throughout this invention, **USM CNC Editor** can provide another opportunity and alternative solution for CNC machining in local and global markets.
- In addition, it is also can increase flexibility in Industrial Revolution 4.0 and future manufacturing industries.

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