**Checklist for original article**

Title of the manuscript :

Please check below items as ✔. mark before submission of the manuscript.

**1. General guideline**

□ Manuscript contained one original manuscript, checklist, statement of copyright transfer, and introduction for authors and was dispatched via email (Statement of copyright transfer should be dispatched via PDF file)

□ Manuscript should be typed in Haangul or other word processor with a space of 30 mm from upper, lower, left and right margin, 10.0 pt in font size, and line space of 160%.

□ Terminology was written by those from recent edition of English-Korean IT Terminology published by the Korean Standards Association.

**2. Cover page**

□ Title, name of authors, affiliation was described both in English and in Korean.

□ In lower area of cover page, the name, address, email, telephone, fax of the corresponding author or presentation in the scientific meeting were described.

**3. Abstract and Keywords**

□ Word count was equal to less than 250.

□ A total number of word count was described below abstract.

□ Keywords were described in IT Subject Heading if possible.

**4. Main text**

□ Main text was sorted as introduction, main subject, conclusion order.

□ Quantity of main text was equal to or less than 10 pages of B5 size (10.0pt in front size, and line space of 160%; Word count was equal to or less than 4,000)

□ References in the main text were described according to the Instruction to Authors.

**5. References**

□ Every articles in REFERENCES were cited in the main text.

□ References were numbered according to numeric order.

□ Abbreviated title of the journals were those from IT or Korea IT.

□ All references were written in Korean and English.

□ The reference style was followed by the Instruction to Authors.

**6. Tables and figures**

□ The titles and legends of tables and figures were written in Korean and English.

□ Photos were in required format.

□ The numbers of tables and figures were described according to the Instruction to Authors.