Prof Dr Wanbil Lee DBA

President, iEthics – The Computer Ethics Society
Adviser, e-Center – European Center of e-Commerce & Internet Law
Life Fellow & Founding Member, Hong Kong Computer Society
Fellow (Information Discipline), Hong Kong Institution of Engineers

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To Hon Wong Yuk-man, Chairman, Panel on Information Technology & Broadcasting
Via Ms Yue Ting-po, Clerk, Panel on Information Technology & Broadcasting

Submission in response to the Panel's invitation for views on
"Proposal to establish a Unified ICT Professional Recognition Framework in Hong Kong"

Chairman

The notion of ICT professional recognition is not new, and call for regulating (including licensing) the computer work force is long-standing (Lee, 1983). Albeit late, I am nonetheless gratified to note OGCIO's proposal (the Proposal) and the Task Force's recommendation (the Recommendation), and I praise the effort thereof. I therefore urge the Panel to give this vitally important issue a fair and objective hearing and desirably return a verdict in the affirmative. I submit hereunder my argument of support that comprises a 5-point premises, a 3-point conclusions and a 4-point recommendations.

PREMISES

Start now despite an arduous way forward

1. The way forward is obviously no easy sailing, yet a journey of ten thousand miles starts with a single stride, the need for and urgency of an ICT professional recognition framework is obvious:
    *   Abuses of ICT continuously rage every corner of society, and profound damages follow at ever increasing speed and severity.
    *   New and more sophisticated technologies such as the Internet, social media, the Cloud, to name a few, have enlarged the system of human interaction.
    *   A lack of formal ICT professional recognition has adverse ramifications that span not only technical, economic and legal but also political, social and international aspects of our life.

    The exercise of implementing the proposed framework has to start despite the obviously complex plan and the arduous action: Balancing the social, political, economic, technical and academic interests involved necessarily consumes enormous resources and stretches not only our skill but also our patience; satisfying the precondition challenges our talent and expertise; resolving the multitude of the enormous and diversified issues involved must be efficient in technical and economic terms, fair in social and political terms, and plausible in epistemological and philosophical terms because of the stakeholders: the government, the various interest groups of the ICT work force, the academic community, and the general public. Notwithstanding, this is not unsurmountable.

Epistemological and Philosophical Issues

Precondition and justification of ICT professional recognition

2.　Having ICT qualified as a profession vis-à-vis Medicine and Law, or even Accounting, and to a lesser extent Engineering, is a prerequisite for ICT professional recognition.

ICT practitioners are arguably on a par with lawyers and medical practitioners who are recognized and trusted by society for their expertise in taking care of the vital elements for our survival - safety, wealth and health. ICT practitioners as a whole handle information which is just as vital as health and wealth. Hence, ICT practitioners should be accorded similar privileges and of course expected to bear similar responsibilities.

It has been argued in some quarters that ICT is regarded as below par with Law and Medicine because it does not measure up to the requirements of a *strongly-differentiated profession*. However, the "requirements" are not universal. Furthermore, as shown in a comparative view tabulated below, ICT is virtually on a par with Engineering and approaches Law and Medicine. This doubt is arguably quashed. [Note: a profession usually refers to "strongly differentiated profession" which has power and responsibilities that are exception to ordinary morality and a non-strongly differentiated profession has efficacy attributing to the employer.]

Features	ICT	Engineering	Medicine/Law
1. Esoteric knowledge	Yes/No	Yes	Yes
2. Autonomy	Yes/No	Yes/No	Yes
3. Formal organization	None of the many professional bodies related to ICT empowered to grant recognized "professional qualification"	Yes	Yes
4. Codes of ethics	No single set of codes (related to above)	Yes	Yes
5. Social function	Yes, though non-unique yet significant in and indispensable for a multitude of social functions	Yes	Yes

Technical and Political Issues

Key Principles and Operational Arrangement (LC Paper No. CB(4)532/13-14(03))

3.　With respect to the Key Principles (Item 10),
   - "*Voluntary-based*" (Principle (a)) is, to say it mildly, misleading, because meeting the requirements of recognition is compulsory, hence "regulated-based".
   - "*Recognize the ICT professional qualification framework*" (Principle (b)) impinges on ICT being established as a profession supported by law, accepted by employers and the public, and respected by practitioners.
   - QF is preferred with the proviso that the generic competence be strengthened with, in particular, the requirement of a sense of morality in the work place. (Principle (c))

   Referring to the Operational Arrangement (Item 11), "*Awarding Body incorporated under the Companies Ordinance*" necessitates legislating for an assessment and monitoring of qualification scheme and establishing a registration management mechanism.

Implementation Strategy

4. The (Task Force's) Recommendation is relatively silent on implementation. *A holistic-phased design-implementation strategy for way forward* will soothe the tough and rough way forward alluded to earlier and dovetail with the proposed framework, and a strategy of holistic in design and phased, staged in implementation, will highly likely culminate in a holistic implementation in the end.

Good, clean and fair ICT

5. For ICT products to be "human-centred, environmentally sustainable and socially acceptable" (Patrignani & Whitehouse, 2014, p.78), the ICT work force must necessarily be fair. Being fair impinges upon professionalism which is substantiated by a code of ethics and relies on our sense of justice and equality grounded in ethical principles. For an ICT professional recognition scheme to sustain, a real appreciation of relevant ethical principles is mandatory. Among others, Ethical Computing (Lee, 2015) is ready to help.

CONCLUSIONS

1 . The way forward is not easy but not unsurmountable; the issues involved inherently complicated but not unsolvable; and the stakeholders diversified and the interests thereof enormous but rational and reasonable. Need and urgency to proceed is evidenced (Premise 1).
2 . The epistemological and philosophical issues of the precondition for establishing the professional status of ICT on a par with Law and Medicine are arguably settled though the technical and political aspects remain but I believe the Hong Kong ICT community is willing and ready to tackle them (Premises 2 and 3).
3 . In sum,

今時今日, 不只 "非財不行", 同時 "非 ICT 不行"。**Simply, "非 professional recognition, ICT 不行"。**

I therefore support the establishment of ICT professional recognition; I trust that Hong Kong has the necessary and sufficient talent and expertise to meet the precondition and challenge thereof. I see the utility of a unified framework that ensures a good, clean and fair ICT profession (Premise 5); hence, I appeal to the ICT fraternity to put aside vested interests, if any, and unite in working towards a common goal, holistically for the welfare of every stakeholder; I encourage OGCIO to follow up the Recommendation. Finally, I advise the parties concerned to start without delay lest Hong Kong will be lagging behind, and to be pragmatic in implementation (Premise 4) for which I recommend the following.
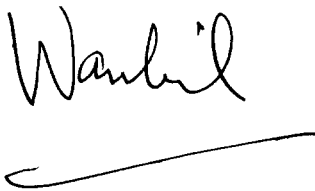

RECOMMENDATIONS

1 . With respect to Principle (b) (Premise 2)
    *   *Legislate* for a regulatory mechanism – an "ICT professional recognition ordinance"
    *   *Dichotomize* the range at, say, "Programmer": "professional" for programmer and above and "paraprofessional" for those below programmer since the spectrum of ICT job categories is too wide and diversified for a unified framework

- *Initialize and support dichotomization* [the government (OGCIO), tertiary education institutions]
- *Public consultation and promotion of dichotomization* targeting the various interest groups

2 . *Establish* an "ICT Registration Board" (ICTRB) (Premise 3)
[Note: ICTRB is somewhat akin to, for example, the Engineering Registration Board (ERB) for registered professional engineers, with the management of the board delegated to the Hong Kong Institution of Engineers. In the case of ICT, management can be delegated to one of the existing computer-related societies or to a newly established organization formed by members of the ICT work force. In any case, a single umbrella organization thus emerges will contribute to complement and further strengthen the hitherto alleged deficiency in the argument for the *social function* and *code of ethics* requirements.]

3. Develop an implementable plan and adopt a realistic strategy (Premise 4), and Principle (a) automatically taken care of (Premise 2)

4 . Address the soft issues (work on the mortar when the bricks are delivered) (Premise 5)
- Promote and educate the essential concepts targeting at practitioners as well as laymen [the "ICT Registration Board"]
- Enforce the ethical element under the head of Generic Skills in QF [Education Bureau]
- Align, review and effect a compulsory element of Computer Ethics in the tertiary and post-secondary curricula leading for awards for potential ICT professional graduates [universities and colleges]

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Wanbil Lee