## **Hoptoad Enterprises Ltd.**

Consultancy in Strategic Planning, Business Simulations, Scenario Building, Socio-Economic Impact Management and Mediation Services

National Science Foundation 4201 Wilson Blvd Suite 1175 Arlington VA 22230 11.06.2010

## Letter of Support for:

Global Early Warning System (GEWS) with Cloud Computing Technology grant application
As submitted to Computing in the Cloud (CiC) PROGRAM SOLICITATION NSF 10-550
by Professors Harold P. Sjursen and Takeshi Utsumi.

In traditional academic education and in business training, problems tend to get addressed through the lens of a single discipline. In such cases solutions can usually be identified which, in the context of that discipline, and often with mathematical support, can appear to be optimum. "Single-Issue" campaigning organisations often approach their concerns from this starting point. In practice however, government, business and other major entities are confronted with the need to address multiple problems in parallel. Typically, many others beside the "main players" may influence inputs or be affected by outcomes and emotion and prejudice may count as much as scientific or economic fact. In such cases an optimum and rational solution to one problem can cause significant complications in other areas. In such multi-issue, multi-stakeholder contexts the best outcome that can be hoped for may not be an optimum one, but rather the combination of sub-optimum solutions which, in aggregate, represent the least worst" outcome. Irrational factors may need to be taken into account as well as potential unintended consequences of decisions that can have repercussions over a very long time scale.

It is with this insight that as a Vice-President of Shell International Petroleum, and later through my company Hoptoad Enterprises Ltd., I became involved in the development and use of simulations for education and training purposes. Such simulations have proved to be powerful tools for sensitising business and political leaders to the complexities involved in such decision making. A single central problem is postulated – e.g. nationalisation of the gas industry in a country which faces serious economic challenges and low social cohesion, and in which the government's hold on power is tenuous – and the entities directly influencing the outcome, or who will be directly or indirectly influenced by it, are identified. Up to sixteen groups may be accommodated, typically in teams of two to six persons, and entities represented may include ruling and opposition political parties, private companies, multi-laterals, local communities, think-tanks, non-governmental organisations and media. Initial briefings are team-specific and not necessarily comprehensive or wholly reliable. Following preparatory work within the teams, interaction between teams takes place over, typically, a one and a half day period, followed by a half-day debrief. Such interaction is intense, indeed exhausting, involving information – or disinformation – exchange, problem analysis, image management, solution identification, alliance building and negotiation against a background of rapidly changing priorities and schedules driven by the teams themselves.

Players of such simulations have included undergraduates, MBA students, business leaders, civil servants and politicians up to the level of state-governors in Latin America. Columbia University's School of International and Public Affairs (SIPA) have made use of my simulations since 2004. It is through Columbia University that I have met Professor Tak Utsumi and I have been very positively impressed by his proposals for the GEWS project. This will, I believe, provide a powerful means for assisting developing countries in their strategic planning. Professor Utsumi has seen the potential for using simulation and scenario techniques within the project and with this I concur. The great strength of such techniques is that they help highlight long-term impacts, particularly those from resulting from trends or factors which may be weak in the short term, but which in different circumstances, and over a long time span, can cause major economic, ecological or social change or disruption.

It therefore gives me great pleasure to associate myself with Professor Utsumi in this venture and to lend it my full support.

Yours Faithfully:

D.A. O'Neill