Extract of Proposal to the John Templeton Foundation (JTF)

This essay briefly describes key elements of a General Information Theory (GIT) project, using the format required by JTF. As such, it presents a type of "manifesto" for GIT (3 pages total).

EXECUTIVE SUMMARY:

Information wherewithal is our greatest adaptive tool. It underpins all current and future roles, whether in science, art, religion, society, or general evolution. No bigger science is possible past an effective – deeply *meaningful* – Information Science. Oddly, no **true** cross-disciplinary Information Science (IS) exists. Instead, a jumble of partial views prevail across diverse areas – Library Science, Shannon Information Theory, physics, biology, etc.. This muddled vista marks decades of en-cultured divisions with no shared "core informatics."

This project addresses core informatics in a methodic study of Universal Theories of Information (UTIs) and root structures, and aims to initiate a cohesive informatics. The project focuses on the most difficult area – *a priori* genesis of meaningful information – to posit a firm base across diverse disciplines. This project requires focused research and outreach, such as: presenting at conferences, researching and publishing papers, writing popular articles/books, web videos, cultivating collaboration, and the like. The targeted goal is a robust theoretic and pedagogic base, with qualified contributors, well-positioned to initiate 21st century computational models.

PROJECT ACTIVITIES:

The core informatics anticipated by this project implies a Kuhn-like paradigm shift. Thus, the needed activities are diverse, with strategic and tactical facets. Also, as Philosophy of Information (*proto* IS) is a *de novo* discipline, no easily-named path exists for realizing that shift. As such, a largely opportunistic entrepreneurial perspective is needed. Strategic and tactical activities are as follow:

First, strategic activities are of greatest potential benefit, and include (in priority):
A. Identification and cultivation of **true** "cross-discipline" contributors, for early synergistic leaps. High-Value *novel* programs are often typified by explosive early growth, that co-incidentally sets an early cultural direction. The challenge here is to realize early growth while managing innate cultural risks – emphasizing a need for "quality founders."
> *Current status* is not yet defined. No true cross-disciplinary pedagogy exists to facilitate locating good candidates. Such individuals must presently be found in a near-accidental manner, across diverse interests. The "field of players" is currently typified by a few individuals, often in diverse fringe roles, with partial models and no broad cohesion, who rarely seek "cross-pollination" of base concepts, goals, and terms, and who must compete against each other for funding.
B. Assessment of actual UTI feasibility. A clear *a priori* theoretic foundation for IS must be set. Whether *any* UTI is even possible is somewhat uncertain, akin to the problem of defining a unified field theory.
> *Current status*: strongly suggestive IS core elements are already identified (GIT) – a factor driving this proposal's submission. Still, a full expansion, articulation,

interleaving, and testing of those core elements remains to be done in a robust cross-disciplinary manner; along with developing a broad shared computational foundation.

C. To enact a "new informatics," to shift from theory to application, requires en-cultured market awareness. Humanity's greatest cultural gains are often linked to key advances in informatics, whether as the advent of language, a printing press, radio and television, or the Internet. This informational heritage sets a map for later informatics. Also, the innate blessing-curse of an effective UTI is that it applies to *any* human conceptual notion – where a UTI's value may then become diluted or diffuse if not properly focused. Thus, an *opportunistic* application of a UTI requires accurate assessment of: likely paths to adaptation, resources available to support adaptation, and niches having a high likelihood of influential success.

> *Current status* of this facet is presently undeveloped. No specific thought is yet given to this issue as its direction is largely driven by results of the first two strategic activities.

Second, given the *de novo* nature of this project, tactical roles aim to improve strategic clarity and direction, while also fortifying basic aspects of an effective UTI. A partial list of tactical activities includes: presenting at conferences, researching and publishing papers, writing popular articles/books, developing web videos, and the like. The activities are further detailed as follows (no order of priority):

A. <u>Presenting at conferences</u>: includes academic and trade conferences focused on informatics and information fundaments. This may also include conferences addressing facets of systems science, complexity, computer science, consciousness, and the like.

B. <u>Researching and publishing papers</u>: is focused on two elements: 1) adding to the established literature on UTIs; 2) the opportunistic uptake of topics revealed by conference attendance.

C. <u>Writing popular articles/books</u>: is part of the general outreach needed to communicate a UTI concept and its value, and to co-incidentally assess general market receptivity and niches.

D. <u>Producing web videos</u>: seeks to improve the general accessibility of UTI concepts.

STATEMENT OF SIGNIFICANCE:

Various UTI models are posited. These include: Burgin's GTI, Hofkirchner's UTI, Deacon's teleodynamics, Searle's Biological Naturalism, Brenner's LIR, Klir's GIT, Abundis's GIT, etc.. Within this field of proposals, no basis exists for gauging strengths and weaknesses of each proposal. This project addresses that gap via SWOT (strengths, weaknesses, opportunities, and likely tactics) analysis. That SWOT analysis would entail many foundational topics already raised in the literature, but in a comprehensive and cohesive matrix. It would then gauge all posited proposals against the matrix's elements. This SWOT analysis suggests one of several possible titles for research papers. Three other possible titles include: An Approach to the Traveling Salesman Problem (re "P=NP?"); One Problem – One Thousand Faces: Bridging Philosophy and Science; Athena and Odysseus in the 21st century (re information, evolution, and gender dynamics). Actual topics and titles will be driven by discoveries from strategic activities.

OUTPUTS:

Targeted outputs are already broached in Project Activities (tactical activities) and in the Statement of Significance. The most significant and consuming output is the noted SWOT analysis. Three additional paper titles are also suggested above. All papers will be submitted to

various journals for possible publication. Other planned outputs are specific web videos that explore/clarify papers (forthcoming and/or already developed, see – ███████████████), and/or videos that complement/update earlier videos (███████████████). Moreover, the attendance of conferences requires the development of "output" presentations to be given at those conferences. Lastly, participation in online discussion groups (virtual conferences) is another planned output. Other outputs will be opportunistically named and pursued as more is discovered and as time and resources allow. Beyond these named outputs it is difficult to be more specific, given the project's exploratory nature.

OUTCOMES:

The "ultimate outcome" of this project is a new computational platform/paradigm, akin to the advent of Bit processors circa World War II. This "new platform" would break open new informational realms for humanity. Still, this "ultimate goal" seems unlikely, given the three year time frame that JTF allows. A more modest and still-possible three-year outcome is to establish a firm theoretic basis for developing a new computational platform. A slightly more ambitious three year-outcome would be to define a firm computational model to pair with that new theoretic basis. Next, an ultimate outcome would be to deploy that computational model as a "machine intelligence" that facilitates new inventions. Alternatively, if the first "minimal" outcome is not possible the specific factors prohibiting or hindering the development of a new computational platform would be made clear. Still, even other unanticipated outcomes seem possible, given the underlying nature of historic "quantum" informational leaps.

RELATION TO DONOR INTENT:

JTF asserts that it is especially interested in bold ideas that cross disciplinary boundaries to engage the Big Questions. Above, I have asserted, in an equal manner, that this proposal addresses the "biggest science" possible for humanity, and, in fact, touches on every possible human notion of "experience." Beyond this admittedly grandiose claim, I am not sure what else I might add to clarify the projects relevance to Sir John Templeton's intent.

WHY IS THIS THE RIGHT TEAM FOR THE PROJECT:

Marcus has a diverse background with a history of success that makes him well suited for undertaking this project. He has nearly 20 years experience in diverse high-tech businesses in diverse roles. His last high-tech role was managing the European market for a firm with a key technology of the Internet explosion – the Ethernet port used on many IT devices. This also means that Marcus has experience with strategic and tactical deployment of key IT technologies, in very high-growth situations. Lastly, he is well versed in the human potential movement, most notably as an advanced facilitator at Stanford University's GSB notorious inter-personal dynamics (touchy-feely) class. The hope is to be able to recruit equally qualified (or better) contributors over the course of this project.