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LAKHVINDER DAVID TAKHAR ™
CENTER FOR ADVANCED STUDIES

TS: Terrestrial Saturation ™
Territorial Saturation ™

Alliances & Tools:

Panasonic ®
TOUGHBOOK

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RADDS: | Research | Analysis | Design | Development | Special Operations |
& HPC: | High Performance Computing |

TS: Terrestrial Saturation ™
Territorial Saturation ™

Global Ambient Intelligence Sensory Saturation.

The 6 minute Solution.

TS is an architectural and operational concept for a ubiquitous & pervasive sensory, computation, informatics, communications and network system. The system of systems forms a global ambient intelligence with emergent properties for civilian, military and intelligence applications. TS is an unanticipated culmination of a quarter century of a set of Lakhvinder's seemingly discrete works which have coalesced into TS after a catalyst appeared in the form of a request from the US Air Force. Further work has been performed at the request of the US intelligence community and internal exploration. This work and the expanded works are the exclusive intellectual property of Lakhvinder.

TS is an architecture, infrastructure, fundamental enabling set of technologies and reference design platforms allowing for the construction of a global sensory ambient intelligence integrating ubiquitous sensors, manned and unmanned combat systems, information systems, and, most especially-- information itself.

Sentinels provide for reference designs for sensors, information propagation systems and the integration of existing personal information systems, reflexive appliance and combat systems. ambML, tacML, and stratML provide the ambient language for Sentinel and existing systems integrated through Sentinels. HiLLS provides for the combat and support model architecture whilst SAI provides for the dissemination of intelligence securely, and, with the device and human privacy & trust relationships required for a physical and arising meta-societal culture. SOEN provides for the meta-fabric within which Sentinels exist.

BFM / SAViM provides for the computational demands using Metaphor and Abstract as semantic ontologies of informatics atop the Cellular Bundle Databank and Memory Prime within BFM / SAViM. For military and intelligence applications, TS provides a model for AIScom, the Ambient

Intelligence Sentinel Command. This model, adapted for trust and privacy relationships, provides for mass scale global ubiquitous information and social networking with integration of existing systems and services through server scale software Sentinels.

We provide here, snippets of Lakhvinder's related works:

Territorial Saturation: Global Ambient Intelligence Sensory Saturation. 2007.

A ubiquitous & pervasive sensory, computation, informatics, communications and network system architectural and operational concept. The system of systems forms a global ambient intelligence with emergent properties for civilian, military and intelligence applications.

Sentinel™: Concept & Architecture for the Fundamental Construct of Ambient Intelligence. 2007.

The Sentinel™ is the fundamental functional element of Ambient Intelligence for Territorial Saturation. A Sentinel is a simple, inexpensive, robust and autonomous device designed to perform a simple, well defined and well understood function over a potentially long service life or over a short terminal service life. A Sentinel is an unobtrusive device whether for reasons of Lo Load (LO LoaD: Low Observable, Low Detectable) or for reasons of aesthetics. Whilst the devices, and their individual functions, are very simple and reflexive— the collective Ambient Intelligence performs very complex and useful tasks in an emergent manner. In the context of a functional architecture, Ambient Intelligence refers to the collective of devices existing and operating in a given finite 3-space and to the resulting emergent behavior arising from said collective. In this context the Intelligence of Ambient Intelligence refers to the functional logic, architecture and emergent behavior of the devices and their collective presence. In addition to the Sentinel, a flavor of Sentinel referred to as an Embedded Sentinel, is embedded into existing and off the shelf systems which integrates and allows said systems to participate in an Ambient Intelligence. Thus, existing weapons, effects, remote & autonomous unmanned vehicles, communications and informatics systems may be integrated into Territorial Saturation.

GAWAIN™: Global Autonomous Warfare & Ambient Intelligence Network™. 2007.

A superset of Territorial Saturation, this architectural and operational concept extends Territorial Saturation to include autonomous combat systems including weapons & effects. This expanded work was performed at the request of the US military & intelligence communities and internal exploration. This work is the exclusive intellectual property of Lakhvinder.

HiLLS™: Hunter | Listner | Logistics | Seeker ™. 2007.

A nodal military architecture and paradigm of organization & operations for future autonomous warfare.

ambML™: Ambient Markup Language™. 2007.

An XML based language for ubiquitous & pervasive ambient intelligence devices. A language for the sentinels of Territorial Saturation and GAWAIN.

tacML™: Tactical Markup Language™. 2007.

An XML based language for global tactical level C5I STAR and autonomous combat systems for Territorial Saturation, GAWAIN and systems such as FORCEnet & CWIN.

stratML™: Strategic Markup Language™. 2007.

An XML based language for global strategic level C5I STAR for Territorial Saturation, GAWAIN and systems such as FORCEnet & CWIN.

The Vertical Propagation of Situational Awareness & Intelligence (SAI™). 2007.

The vertical propagation of SAI™ in military and intelligence organizational hierarchies and in informatics systems hierarchies.

P2P-SAI™: Peer to Peer Situational Awareness & Intelligence (SAI™). 2007.

The addition of horizontal SAI™ propagation to traditional vertical SAI™ propagation.

The Proper Horizontal Propagation of Situational Awarenss & Intelligence (SAI™). 2007.

The proper horizontal propagation of situational awareness & intelligence through micro-vertical propagation, providing the effect of horizontal propagation, in a secure and controllable manner. A horizontal collaborative layer atop a base micro-vertical layer, a model for horizontal collaboration whilst maintaing vertical multi level security.

The Use of ZigBee for IntraCellular Ambient Intelligence. 2007.

The use of ZigBee in ubiquitous & pervasive systems for ambient intelligence. This work is part of the expanded works in Territorial Saturation and GAWAIN.

The Use of Bluetooth for IntraCellular Ambient Intelligence. 2007.

The use of Bluetooth in ubiquitous & pervasive systems for ambient intelligence. This work is part of the expanded works in Territorial Saturation and GAWAIN.

The Adaptation of ZigBee for Military and Intelligence Applications in Ambient Intelligence. 2007.

The adaptation of ZigBee for use in ubiquitous & pervasive systems for Military & Intellgence applications of Ambient Intelligence. This work is part of the expanded works in Territorial Saturation and GAWAIN.

Cellular Bundle Databank™. 2000-2001.

A Lakhvinder Informatics system designed for high-security, fault-tolerant, mass-scale deep informatics and computation. The system may be regarded as a fully-coupled, mass geographically distributed HPC database. The Cellular Bundle Databank is a technology system which has been decoupled from Lakhvinder's BFM SAViM.

Memory Prime (memory′). 2008-.

An informatics data bank system currently under conceptual architectural development. A distributed, fault-tolerant, mass-scale database for semantic ontological and general informatics.

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Metaphor: A semantic ontological informatics system. 2008-.

A semantic ontological informatics system providing facility for human and automated users to codify informatics intent using an intent description meta-language & schema. Currently under conceptual architectural development. See "Abstract" and "Memory Prime". "Metaphor" includes "ambientMetaphor", a streamlined sub-set for use in ambient intelligence applications (ubiquitous and pervasive computing devices and systems). "ambient Metaphor" also enables polymorphic inheritance as informatics pure functions (not to be confused with the terms in programming) recognizing hierarchical relationships which are local in both logic and geography.

Abstract: A semantic ontological informatics system. 2008-.

An informatics system for the semantic & ontological abstraction of Lakhvinder "Metaphor" informatics (native Metaphor) and the analysis & abstraction of free form, unstructured informatics. "Abstract" allows for free form, unstructured informatics to be analyzed & codified into "Metaphor" informatics (derived Metaphor). Currently under conceptual architectural development. See "Metaphor" and "Memory Prime".

SOEN™, Self Organizing Emergent Network™. 1997.

Lakhvinder technology system de-coupled from Lakhvinder's BFM SAViM. SOEN is an autonomous, autopoietic, self organizing, fault tolerant network system exhibiting emergent characteristics.

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