

# KONAUS™ House

U.S. PATENTS: 8549801B1 D752508S D772156S



**Paul Bleck, COO, President and Chief Architect**

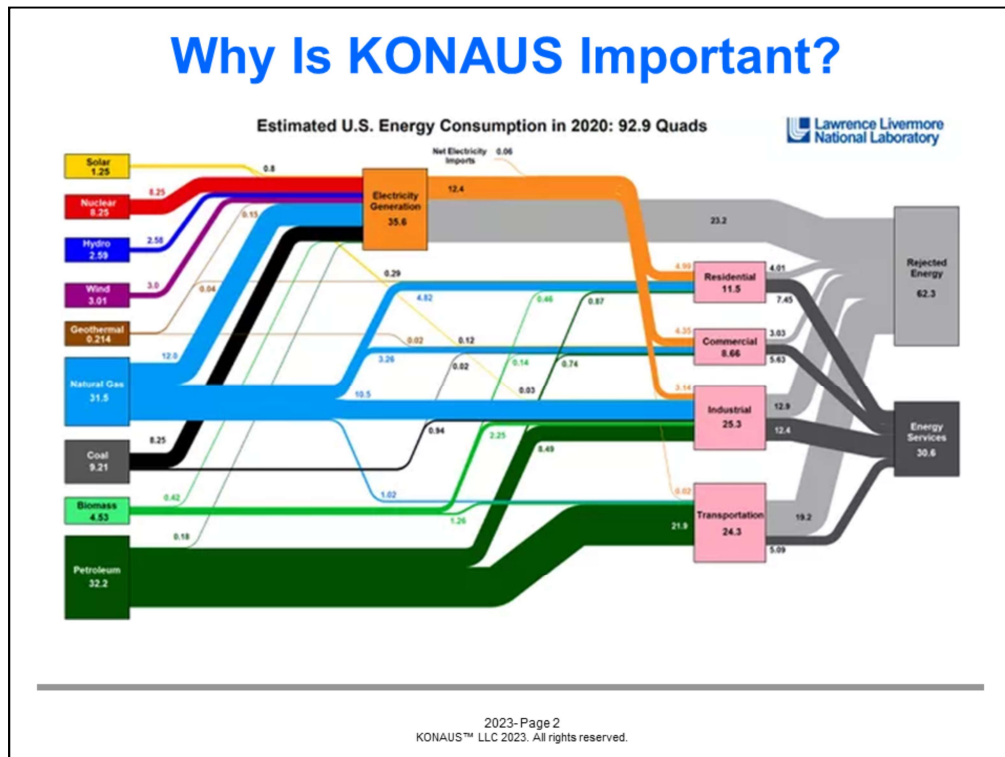
**Jim Farrell, CEO, and Chief Technologist**

**Yoshito “Super” Yamaguchi, CFO, and Executive VP**

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The KONAUS™ House is a new concept in housing. It addresses the energy and environmental issues as well as the value problems of currently built homes in the US, while using modern, but existing and available, materials and building techniques. The House will be well-constructed, utilizing energy independent, technology, and will have a high retained value for both the homeowner and lender. The external landscaping will be specified for local, low-maintenance trees, plants and shrubs that will require little watering, minimal fertilizer and minimal insecticides.



This graphic was developed by the US Department of Energy Lawrence Livermore National Laboratory. In 2020, more than 50% of the electrical energy generated in the US came from coal or natural gas. The US produced 93 Billion Quads (quadrillion BTUs) of energy in 2020. This is the equivalent of 740 billion gallons of gasoline. About two-thirds of this energy was lost.

A goal of the KONAUS initiative is to make residential energy 100% solar, and greatly reduce personal transportation energy reliance on fossil fuels.

## 2023 US Housing Market

- **New Housing Market Recovering:  
1.7 million new starts in 2022.**
- **Mortgage Interest Rates Moderately Rising**
- **Economy Impacts Housing Sales**

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Many new homes are sold based mostly on their visual “curb appeal” and speculative value. When demand falls, the value and actual resale price of these homes falls - frequently dramatically. The KONAUS™ House is built with a concept of high intrinsic value, which maintains a good resale price. This is accomplished with quality energy-efficient construction, home energy generation, smarthouse connectivity, and avoiding unnecessary design elements, that eventually become low-value. A key element of the KONAUS House is that the home generates its own PV electricity, which is also the primary source of fuel for the Electric Vehicle.

## 2023 US Housing Technology

- **Archaic On-Site “Stick” Construction**
- **Minimal Energy Efficiencies**
- **Minimal Technical Innovations**
- **Minimal Security Features**
- **Inefficient Use of Materials**
- **Not “Future Enabled”**

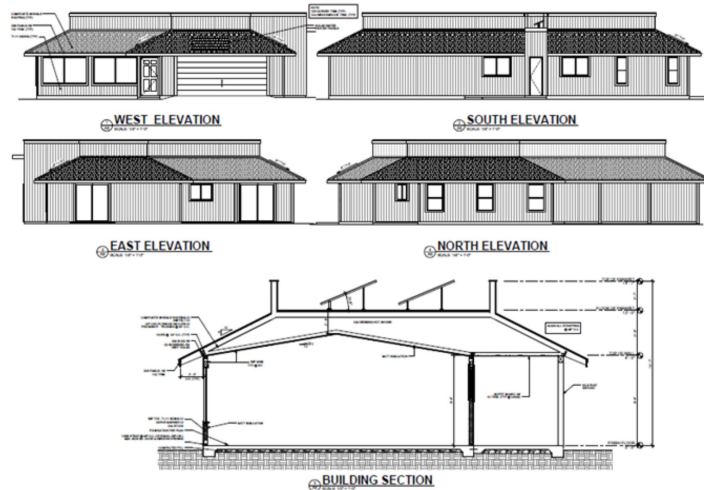
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Many builders construct their houses to the absolute minimum building code standards in their area. Solar PV power, HVAC, advanced security, information, control, entertainment and communications features are usually expensive options and minimally available. Advanced environmentally effective materials are avoided because they tend to be slightly more expensive. The resultant homes are usually visually very attractive, but quickly become obsolete. They may also have immediate speculative value, but will usually have a lower long-term intrinsic value.

# Typical KONAUS™ House Elevations

U.S. UTILITY PATENT NO. 8549801B1



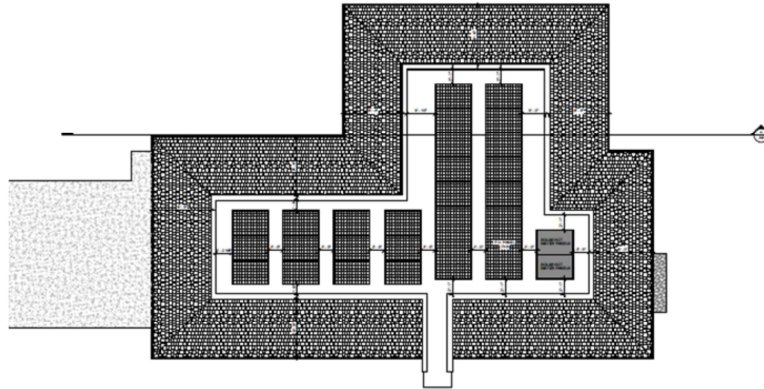
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Using the latest housing CAD (Computer Aided Design) technology, each KONAUS™ House is specifically designed for the geographic region and actual location where it is built. In Hawaii, the roof slope will be approximately 19 degrees, while in California, it will be approximately 30 degrees. These roof slopes are based on the House's latitude and altitude to maximize the efficiency of the PV panels. Even in Hawaii, the KONAUS House design would vary to accommodate the multiple climate zones, altitudes, and other climate building factors of the Aloha State.

The Ua-Mana roof, (design patents allowed), enables an optional water catchment system without introducing a gritty asphalt aggregate or petroleum pollution, which can be a contaminant in the storage system. The first KONAUS House is being planned to be constructed in Kohala, Hawaii.

# Typical KONAUS™ House “Ua-Mana” Roof Plan

U.S. DESIGN PATENTS NO. D752508S and D772156S



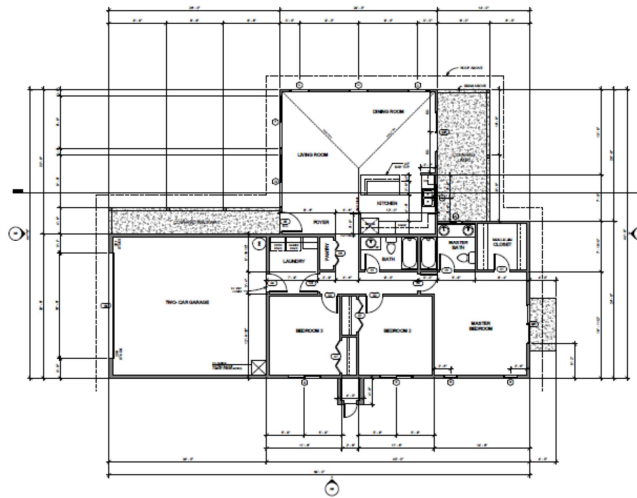
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The typical KONAUS House utilizes a patented parapet design to optimize the efficiency of the PV panels, while concealing the view of the panels from the street.

The Ua-Mana (“rain” and “power” in the Hawaiian language) enables construction of KONAUS houses in dense development tracts and small lots, where positioning of the house is restricted. The roof option shown on this slide also displays a “diving board” rainwater delivery system that some homeowners may implement. The KONAUS initiative allows many creative optional design features.

# Typical KONAUS™ House Plan

U.S. PAT. NO. 8549801B1



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The design of the KONAUS™ House satisfies the owners family needs and requirements as well as being easy to build.

Some design features, like walk-in closets and outdoor showers are strictly optional. Some homeowners do not like walk-in closets. Some locations have weather that does not support an outdoor shower.

## **KONAUS™ House: Design**

- **Modern, Efficient, Environmental Design**
- **State-of-the-Art Building Materials**
- **Steel Roof, Fiber Cement Siding (Option)**
- **Lot Compliant Design**
- **Water Catchment (Option)**
- **Utilizes Existing Material Technology**

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Both standard design and options will enable energy independence in the KONAUS™ House . KONAUS™ LLC plans to research and qualify a number of renewable, environmentally sound, renewable, energy efficient building materials, and provide them to both the homebuilder and homeowner as options.



## **KONAUS™ House Features**

- **Energy Efficient and Energy Independent (including Electric Vehicle)**
- **Grid-Tie (Net Metering), Grid-Assist or Completely Off-Grid Design**
- **Base System 4 kW to 10 kW+ System**
- **Utilizes Efficient PV Solar Panels**
- **First Model KONAUS House Planned for Hawaii**

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The overall size of the recommended PV solar system will be computed well before construction. The resultant energy budget will need to be updated to include the additional energy demand of the Electric Vehicle (EV) as well as the energy budget of the owner-defined appliances and House systems. Prior to construction, the owner will be asked to make several decisions that will effect the size of the PV system needed, including the projected monthly driving range of the Electric Vehicle.

We expect a significant number of “grid-assist” or “off-grid” deployments, for several reasons. In the grid-assist and off-grid versions, the KONAUS™ House will utilize a battery array to store electrical battery for use when the PV system is not producing. In some very remote deployments, an emergency backup generation system may also be provided.

## **KONAUS™ House: Patents**

- **Three USPTO Patents Granted**
  - **Utility Patent: 8549801B1**  
**October 8, 2013 12 Claims Allowed**
  - **“Ua-Mana” Parapet Design Patent:**  
**D752508S March 29, 2016**
  - **Parapet Design Patent: D772156S**  
**November 1, 2016**

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The KONAUS House has been granted a utility patent by the USPTO, with 12 claims.

The KONAUS House has also been granted two design patents by the USPTO, for the solar panel positioning and parapet layout.

All three Patents are completely available on [www.konaus.com](http://www.konaus.com)

## **KONAUS™ House: Efficient Energy Usage**

- **Excellent Insulation**
- **LED Lighting**
- **Passive Solar or PV Powered Hot Water**
- **ENERGY STAR® Rated Appliances**
- **EV “Fueled” Wirelessly by KONAUS™ House Roof PV Panels**

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A key element of the KONAUS House energy independence is energy efficiency. The KONAUS™ House has excellent energy usage and conservation characteristics, will offer energy efficient ENERGY STAR® appliances. To enable the efficient use of the energy generated by the home's PV system KONAUS™ LLC will research and work with appliance manufacturers and other home product suppliers to provide a list of appliance options. This list will provide the homeowners the appliance and home features that they want, and still remain within the power budget of the KONAUS House.

## Electric Vehicle Example



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The Electric Vehicle is a key element of the KONAUS™ House. The EV itself does not expel any emissions into the environment when in full electric mode. However, its batteries must usually be charged with power supplied by a local utility. In the US, this power is frequently generated by burning coal (about 40% of all US power generation), which is detrimental to the environment. Utilizing the KONAUS™ House PV solar system for the EV, battery charging effectively completely offsets the power generated by the utility. This not only saves the environment from utility emissions, it saves the homeowner the significant expense of fueling his or her car at the charging station or from the local electric utility grid.

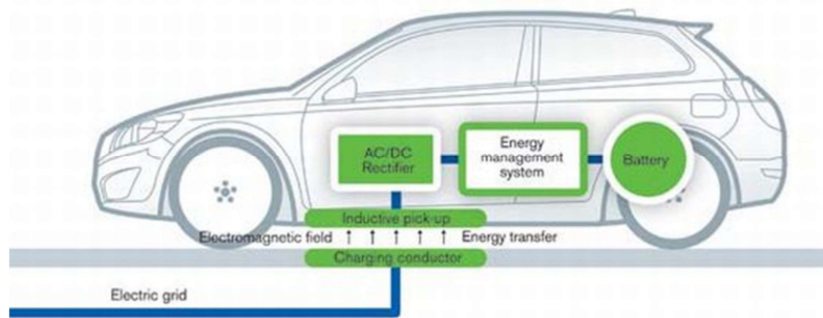
# Electric Vehicle Charging

U.S. UTILITY PATENT NO. 8549801B1

SAE Standard J2954 – Plugless Wireless Charging

SAE Standard J2847/6 – Wi-Fi Communication

SAE Standard J1772 Plug-in (Back-up)



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The EV will usually be housed in the KONAUS House garage for recharging. This provides greater security the vehicle.

KONAUS, LLC will enable a SAE Standard J2954 - Wireless Charging system.

The driver would simply park the EV over an inductive floor charging unit in the garage, and the EV batteries would be automatically charged overnight. The Level I and Level II EV charging system requires a dedicated 240 Volt, 60 Hz, 50 Ampere line (NEMA 14-50 power outlet) from the KONAUS House grid.

The KONAUS House also supports SAE Standard J2847/6 which enables Wi-Fi communication to the charging system and EV.

## **KONAUS™ House Electric Vehicle**

- **Vehicle Charged by Electric Power from KONAUS™ House PV Solar Panels**
- **Zero Emissions**
- **Hassle-Free Automatic Wireless Charging Enabled**
- **Gasoline-Electric (PHEV) Hybrid Vehicle Option Enabled**

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The KONAUS™ House provides the power for the Electric Vehicle. We will implement EV inductive charging system. This will eliminate the large heavy power cord hanging around in the garage. The driver simply parks over the charging area embedded in the garage floor, and the EV will be automatically charged while parked.

## **KONAUS™ House Smarthouse Aspects**

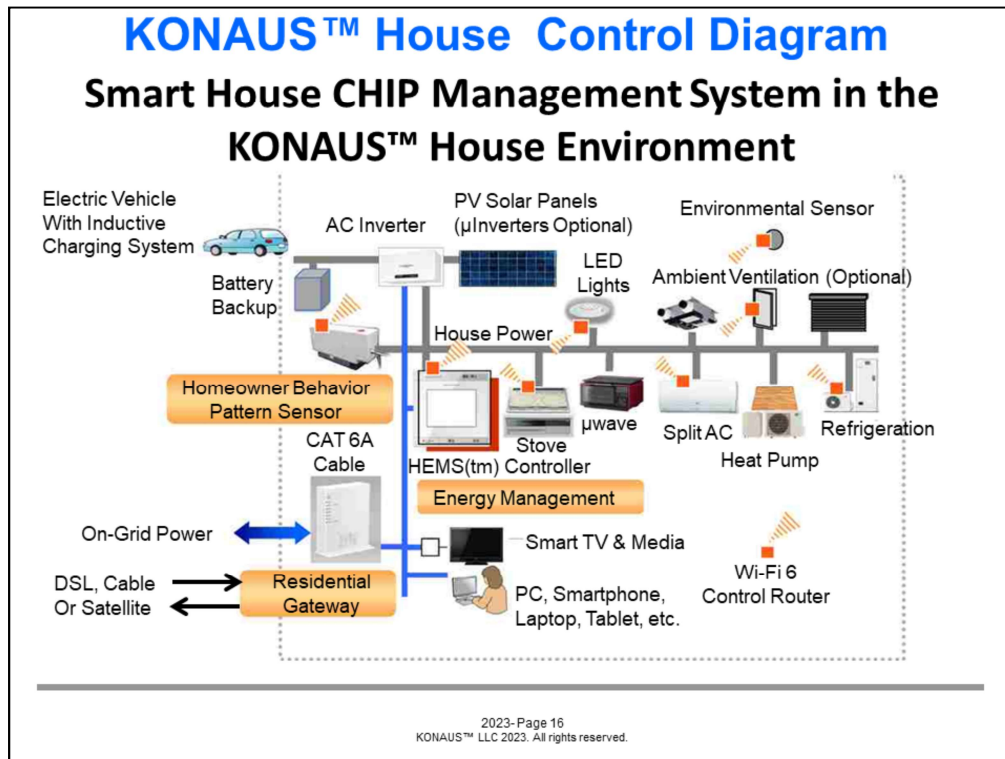
- **Residential Gateway**
  - **Complete Owner Residential Control**
  - **Internet Access via Smartphone or PC**
- **Structured PoE Cat6A Wiring and Wi-Fi 6 Enabled**
  - **DSL, Cable TV, Cable Modem, Security, Communication Enabled**

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The KONAUS™ House utilizes smart house technology, enabled by both a wireless system and Cat6A Ethernet cabling. The system provides wireless energy control and reporting throughout the house. The house will have a unique secure website, accessible and controllable by the owner, both locally and remotely on his or her smart phone. The house will enable safety, security, communication, house control, information and entertainment defined by the homeowner.

The Cat6A Ethernet cabling enables most Power over Ethernet (POE) systems, such as an entryway camera.



The smart house technology utilized in the KONAUS House is a key element to the function of the home. In addition to the appliances and systems shown in the diagram above, new ones can be added with minimal effort. The homeowner can control, monitor and receive alerts from the KONAUS House system, via Wi-Fi 6, on his or her PC, laptop, smartphone or electronic tablet utilizing the Project Controlled House Over Internet Protocol (CHIP) system. CHIP will be a single point of control for:

- Electric Vehicle (or PHEV) wireless charging
- Interior and Exterior Security Camera
- Smart Door Locks
- Security System
- Smart TV and Media System
- PV Solar System
- Smart Lights
- Smart Thermostat
- Smart Garage Door
- Smart Speaker
- Video Doorbell
- Smart Plugs
- Smart Vacuum
- Smart Sprinkler

The graphic shown is not all-inclusive. Additional smarthouse technology may be implemented.



# KONAUS™ PoE Structured Wiring

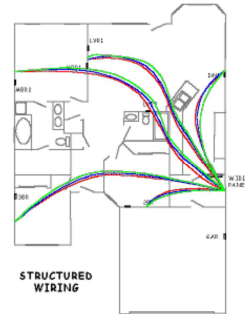
U.S. UTILITY PATENT NO. 8549801B1



Residential Gateway



Cat 6A Cable



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The KONAUS™ House structured wiring contains the cabling to enable the electronic systems. The home will also utilize Wi-Fi technology – along with the Cat6A cable – to enable energy management. The Cat6A Ethernet cables supports up to 100 Watts of Power over Ethernet (POE).

The residential gateway, a home PC, tablet or Smartphone, control all of the systems. By implementing structured wiring at the time construction, the homeowner can enable his or her smart home and entertainment system immediately, at minimal cost.

## **KONAUS™ House Features**

- **Builder Defined:**
  - **House Positioning**
  - **Construction Type**
- **Owner Defined:**
  - **Appliance Options (Energy Star®  
Rated List)**
  - **Home Finishes**

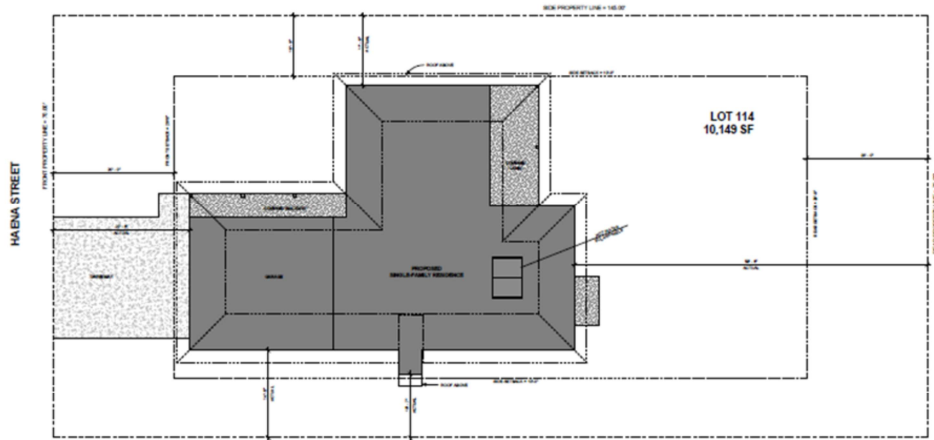
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KONAUS™ House permits the homeowner and builder to define many aspects of the completed home. The builder will need to accommodate the lot size and positioning, as well as other local regulations and cost constraints. The homeowner can make modifications (within the constraints of the KONAUS™ House specification) to implement specific appliances, finishes, and upgrades.

# Typical KONAUS™ House

U.S. UTILITY PATENT NO. 8549801B1



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Thank you for taking the time to review our KONAUS™ House initiative. The concepts for the KONAUS House initiative were developed by Paul Bleck, Yoshito “Super” Yamaguchi, and Jim Farrell.

## KONAUS™ Management Team

### Paul Bleck, COO

Proprietor, A. I. A. Ltd.  
Licensed Architect in  
California & Hawaii



### Jim Farrell, CEO

Director, TRON  
Forum US Liaison  
Office, Life Senior  
Member, IEEE



### Yoshito “Super” Yamaguchi, CFO

Founder, Sennet Corp.,  
Former President, Mitsubishi  
Electronics USA



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Licensed in both Hawaii and California, **Paul Bleck** also serves as Qualifications Examiner for the Licensure of Architects in the State of California. As principal of his own firm for over 20 years in Hawaii and California, projects have been completed in Hawaii on the Big Island, Maui and Kauai. In California, projects have been completed among many southern coastal communities from Santa Barbara to San Diego. Other projects include work in Vancouver, British Columbia and Bald Head Island, North Carolina. Additionally, Paul serves as the Consulting Architect for the Architectural Board of the Mauna Lani Resort Association, and also serves as the Consulting Architect for several Design Review Committees in Western Hawaii.

**Jim Farrell** was Director of the US Liaison Office for the T-Engine Forum. Previously, he held positions with Motorola, Inc., VLSI Technology, Inc. and EAI, in several engineering and marketing management roles. Jim spent several years working on consumer electronic technology at Motorola and VLSI Technology. He has been involved with smarthouse technology in the TRON Association and the T-Engine Forum for over twenty years. Jim was promoted to Life Senior Member of the Institute of Electrical and Electronic Engineers (IEEE).

**Yoshito “Super” Yamaguchi** is a partner at KONAUS, LLC. “Super” Yamaguchi graduated from the University of Tokyo, Faculty of Law in 1957. He has also completed advanced studies at the Massachusetts Institute of Technology Sloan School of Management in 1982. He joined Mitsubishi Electric Corporation also in 1957, and spent fifteen years at the Nagoya Branch in various positions. He was then relocated to the US, where he was promoted to President of Sales and then to Chairman, of Mitsubishi Electric, America. Following this ten year tour in the US, Yamaguchi returned to Japan, where he held positions as the Division Manager for Overseas Marketing and Managing Director for Overseas Marketing.

Registration for KONAUS, LLC has been filed in the County of Hawaii, State of Hawaii, USA