MOBILE APPS

CINERA

ivss

KAHUNA®
systems

AU-RION

About: Kahuna Systems

- Kahuna was originally the Embedded System Division of 3Di systems and is working independently since 2008.

- A Product Engineering Services Company based out of Pune with offices in Mumbai and US as well.

- Kahuna, a pioneer in Ubiquitous Computing, focuses on Embedded Software services as well as Product Development.

- Kahuna is :
  - DaVinci Solution Partner with Texas Instruments
  - ARM Technology Partner
  - Renesas Software partner

- Kahuna has worked with more than 20 customers across Globe.

Kahuna is a hawaiin word meaning a sorcerer, wizard or craftsman. In business context it means a professional expert with in-depth knowledge of his services or solution he provides.

Technology Partner

- Kahuna provides Services for:
  - New Product Development and Customization
  - Re-Engineering of existing products
  - Porting ,Migration and Integration to different hardware/ OS platforms
  - Web Based device management solutions
  - Application Development
  - Cloud Computing

- Customer Services Include:
  - Technical Consultation
  - Performance, compatibility and Reliability testing
  - Technical product Specification development

- Focus Verticals
  - Networking
    - Gateways, Servers, Routers, Switches etc
  - Industrial Automation
    - Data Loggers, Control Systems, HMI, PLC etc
  - Multimedia
  - Manufacturing
  - Healthcare
  - Consumer Electronics
    - Smart phones, VOIP, POS/ KIOSK etc
  - Robotics
  - Mobile Computing
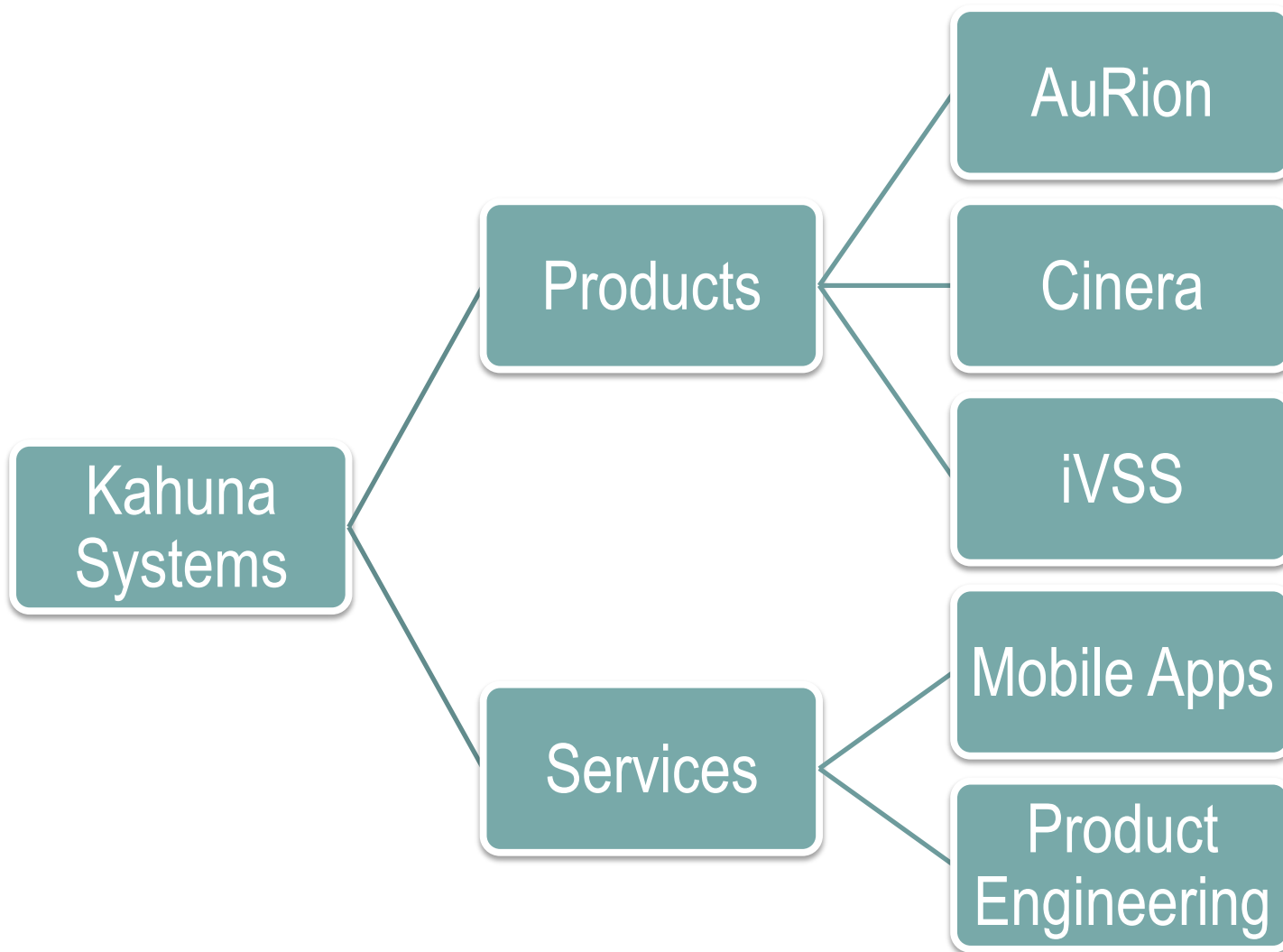   - Android, iOS, Symbian, Palm , Flex, Blackberry etc

Value Proposition

- We help in providing correct scope, identifying and resolving issues, project management and cost optimizing techniques.

- We help Customers to focus on their core activities.

- Ability to learn new domains and technologies quickly.

- Focus on automation to reduce development time.

- Keeping abreast with technology developments in the market.

- Excellent IP repository for generic components.

- Consultative approach to development.

- Quality solution and services at optimal cost and time.
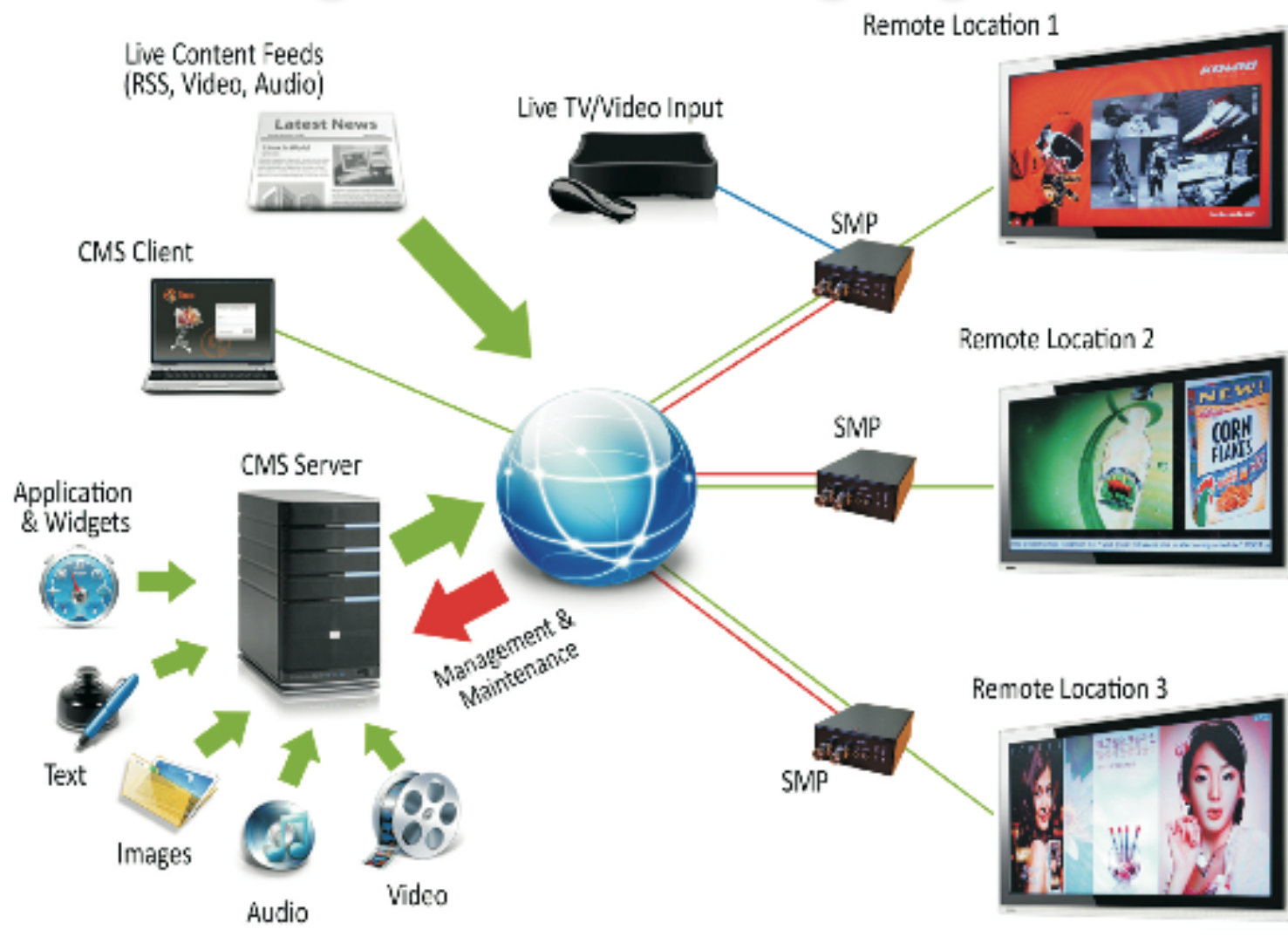
Kahuna: Business Portfolio

Kahuna – Product Solutions

iVSS
Intelligent Video Surveillance Solution
The **Complete** Video Surveillance Solution

Cinera: Digital Network Signage Solution

System Architecture

Cinera: Digital Network Signage Solution

- Features
  - Supports HD TV, LED Panels, LCD Panels
  - Supports TV/Satellite feed with Overlay
  - Streaming Video Support
  - 802.11 b/g Wi-Fi Support
  - Clock & Weather Widget
  - Content playback using playlist and looping

- Device Specs
  - Web based management of signage using CMS
  - No PC required for Signage Media Player (SMP)
  - Green Device – Consumes less then 7 Watts per SMP
  - Zero Configuration and Easy Installation
  - No third party license required for OS, Anti Virus Software and Server Software
  - Supports Digital Rights Management.

- Features of Content Management System
  - Dedicated digital signage server for media management, content update, centralized scheduling & access control
  - Schedule Manager
  - Device Management
  - Layout Manager
  - Play list Manager
  - Campaign Manager
  - Report Manager
  - User Management and Access Control

- Device Specs
  - Video Input : Composite, NTSC/PAL
  - Video Output : HDMI 1.2/DVI
  - Audio : Stereo Input & Output
  - Storage : Content Storage on SD Card

iVSS: Intelligent Video Surveillance System

Software Upgrade Server (SUS)

Media Storage Server (MSS)

iVMS Portal

Analog Video Camera

iVMS – Config Manager

Internet

WAN

iVE100

WIFI Access Point/ Internet Router

LAN

Network Camera(s) running iVE100

iVE100

iVMS

PTZ

Analog Video Camera

Alarm

System Architecture

iVSS: Intelligent Video Surveillance System

- Features

  - Enterprise class end-to-end/complete video surveillance solution.

  - Actionable Intelligence .

  - Real-time video analytics.

  - Significant network, man power, and storage reduction.

  - Easy installation, integration and operation.

  - Low power consumption and low cost of ownership.

- Device Specs

  - Video Input : Composite, NTSC/PAL (Single Channel).

  - Ethernet 10/100.

  - Audio : Stereo Input & Output.

  - Terminal Block : 4 configurable Input/ Output.

  - USB Port : 2 x USB 2.0 High-Speed Port.

- Benefits

  - Compact, rugged and mountable design

  - In-built video content analytics (VCA)

  - 25/30 FPS D1 Size VCA and Video Compression

  - Local and storage network

  - Secured network communication

  - Browser based management of entire system

  - Live Preview and playback

  - Advance view layouts

  - Extensive and fast search of videos and events

  - System wide user management

iVSS
Intelligent Video Surveillance Solution
The Complete Video Surveillance Solution

Kahuna – Services Market
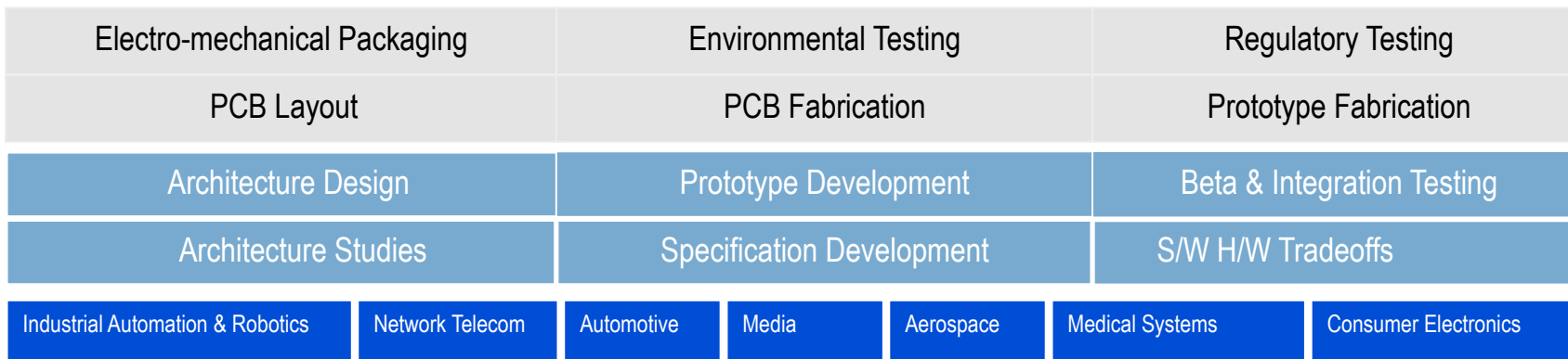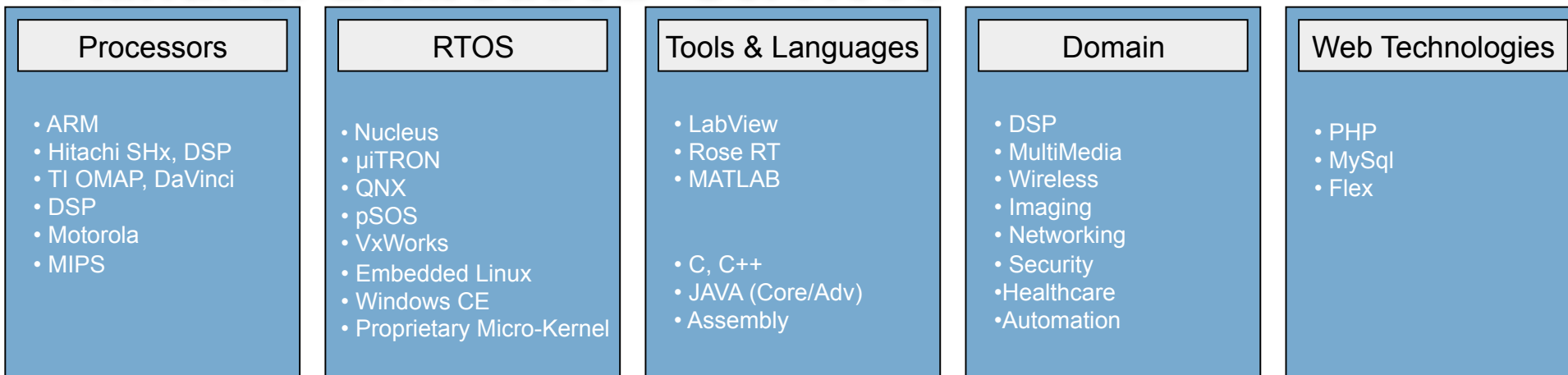# (Product Engineering and Mobile Computing)

Kahuna: Embedded Services

- End to End product development and Integration Services.

- Development of BSPs, Platform Software and Device Drivers.

- Implementation of Communication Protocols and Standards.

- Implementation and Optimization of Standard and Proprietary Algorithms.

- Application Development and Integration
  - Sample application development
  - UI development and Web Services
  - Real time data acquisition and control

- Architectural Designs & Studies

- Migration and Porting to Various Hardware / OS platforms.

- Embedded Web Server development.

- Real-time Data Acquisition, Analysis, Presentation and Supervisory Control Platforms.

- PC-based and Web-based Monitoring Applications and HMIs.

- GUI for Device Configuration and Maintenance.

- Device Drivers for Interfacing with Devices.

- Alpha, Beta and Regression Testing.

- Prototype & Specification Development

Kahuna: Embedded Services

Processors
- ARM
- Hitachi SHx, DSP
- TI OMAP, DaVinci
- DSP
- Motorola
- MIPS

RTOS
- Nucleus
- µiTRON
- QNX
- pSOS
- VxWorks
- Embedded Linux
- Windows CE
- Proprietary Micro-Kernel

Tools & Languages
- LabView
- Rose RT
- MATLAB

- C, C++
- JAVA (Core/Adv)
- Assembly

Domain
- DSP
- MultiMedia
- Wireless
- Imaging
- Networking
- Security
- Healthcare
- Automation

Web Technologies
- PHP
- MySql
- Flex

Electro-mechanical Packaging	Environmental Testing	Regulatory Testing
PCB Layout	PCB Fabrication	Prototype Fabrication
Architecture Design	Prototype Development	Beta & Integration Testing
Architecture Studies	Specification Development	S/W H/W Tradeoffs

Industrial Automation & Robotics	Network Telecom	Automotive	Media	Aerospace	Medical Systems	Consumer Electronics

With Partners	Kahuna Capability

Kahuna- Mobile Computing Services

- iOS (iPhone & iPad)

  - Application development

  - Business and Enterprise Application

  - Widget and Games Development

  - Social Networking Application

  - Web Integration & M-Commerce

  - Navigation and Mobile Website Development

- Android (Including Tablets)

  - Multimedia, M-commerce and M-Banking solutions.

  - Field Work automation solutions.

  - LBS Services

  - Entertainment and Social Network applications.

- WinCE

  - Windows Mobile 6

  - Windows Phone 7

  - Pocket PC 2003, 2002, 2000

  - Tablet PC

- BREW

  - BREW SDK - For application development

  - BREW Distribution System (BDS) - For application distribution management

- Symbian

  - Symbian OS Versions 6.0, 7.0

  - Symbian OS User Interfaces: Series 60

- Other Platforms

  - J2ME, Qtopia, PalmOS, BlackBerry

Technology Expertise

Multimedia-Offerings

- Developing Multimedia Applications like Media Player, Transcoder, Video Editor etc.

- Live Streaming and Video on Demand applications, including Video Conferencing, Video surveillance, Flash - SIP gateway & Video Chat.

- Audio/Video codec development and optimization.

- Ffmpeg based development & customization.

- Developing & designing strategies for multimedia requirements on platforms like Maemo, Moblin, Android, TI and Desktop.

- Enabling compatibility of multimedia products (Capture cards, hardware codec, GPU, etc) on Linux.

- Development/ Customization of various features in existing multimedia applications.

- **Streaming :** Red5, Darwin, gst-rtsp-server, Wowza, Twisted, Lighttpd.
- **Protocols:** rtp, rtsp, rtmp, sip, http.
- **Multimedia Framework :** Gstreamer (Core, Plugins, Application), FFmpeg, VLC, opencore.
- **Video Codec:** H264, Mpeg4, Theora, Mpeg2, VC1, Mjpeg
- **Audio codec:** AC3 (Dolby Digital), Mp3, AAC, Vorbis, Midi
- **Containers:** 3gp, mp4, flv, avi, mpeg2ts, mpeg2ps, ogg.
- **GPU:** VAAPI , VDPAU hardware acceleration API, Intel's IPP,
- **GUI :** QT, Clutter, GTK
- **Video capture cards:** Blackmagic Design cards, Deltacast, FastVdo Smartcapture, etc
- **Languages:** C, C++, java, gobject, python, AS3 (flash), php, html, HTML5
- **Platforms:** Linux, Maemo, Moblin, Android, Texas Instruments (Dm6446, Dm355, Omap, etc), etc

Hardware Engineering Services

- Architecture Development

- Micro Architecture Development

- Verification Environment Development

- RTL coding, Synthesis and Timing Analysis

- FPGA emulation of ASIC

- ASIC bring up support

- IP verification on FPGA

- FPGA development

- API development

- Silicon Debugging

Android- Offering

- Development of Board Support Packages (BSP) & device driver development. e.g. BSP development for ARM Cortex M3.

- OpenGL ES solution for mobile application development.

- Widgets and application development on Android.

- Gaming software for mobile & 2D-3D gaming application development.

- Development of sample applications for semiconductor companies.

- Custom applications development around customer products/processors.

- Migration/Porting of RTOS & reengineering of products.

Linux Expertise

- Experience on 2.4 and 2.6 Series Kernels

- Experience in RedBoot, u-boot and Proprietary Bootloaders

- BSP (bootloader + kernel porting) Capabilities on Multiple Platforms including ARM, MIPS, x86, PPC

- Device Driver Development and Troubleshooting for various Standard Peripherals

- Development of Embedded User-level Linux Applications

- Customizing Linux Distributions for Embedded devices

- Well-established Development Practices using GNU and other Free Software Tools.

WinCE Expertise

- Experience on WinCE 5 and WinCE 6

- BSP Porting and Customization

- Device Drivers for Interfaces like Wifi, USB, Bluetooth, GPRS and more

- Flash Media Drivers

- Power Management

- Windows CE Product Development

- Development of .Net Compact Framework Applications

Technical Skills

- ## Processors
  - MIPS, ARM based 8/16/32 bit microcontrollers
  - DSPs from Texas Instruments, Freescale, Marvell, ST
  - Intel 80x86, Microchip PIC/dsPIC

- ## Operating Systems & Platforms
  - Android, Embedded Linux, eCos, Windows CE, WinXp Embedded, ITRON, VxWorks, TinyOS, uCOS, BREW.

- ## Programming Languages
  - C, C++, C#, .Net, VB, Assembly for various micros

- ## Hardware Interfaces, Controllers / Devices
  - USB, PCI, Ethernet, Serial, WLan, IDE, Compact Flash, SD/MMC, Power Management System, CAN, Display, RNDIS, SPI, I2C, I2S

- ## Networking and Communication Standards
  - Wireless: Bluetooth, 802.11a/b/g/n, RFID, ZigBee, GSM/GPS/GPRS
  - Communication: USB, Serial (RS232, RS485), Ethernet
  - Automation: Modbus, CAN, Profibus and several proprietary

Technical Skills

- Multimedia
  - Video - H261, H263, H264, MPEG-2, MPEG4-ASP
  - Audio - MP3 and AAC/AAC plus (evaluation), Ogg Vorbis, WMA9
  - Voice - G.7XX (G.711, G.723, G.726, G.728, G.729), AMR, EFR
  - Image Processing - JPEG, JPEG2000

- Encryption Standards and Algorithms
  - Digital Signatures & Certificates, X509
  - Encryption Standards & Algorithms, AES, DES, RSA, SHA

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