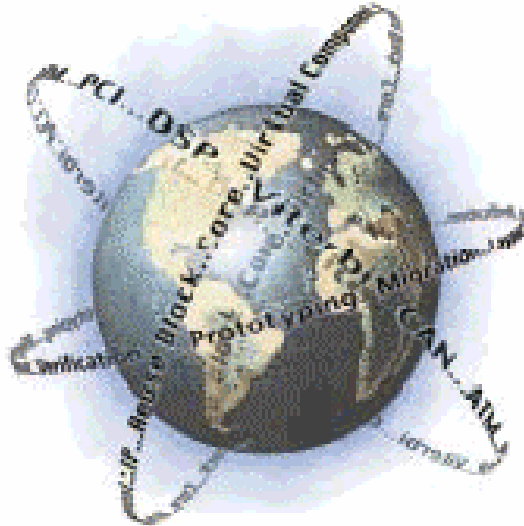


IP/SoC Market Watch

Bulletin N°18 -Q4 -2003



D&R

The IP/SoC Internet Engineering Company

Copyrighted- Information

Confidential and need to know only

ALL INFORMATION IN THIS DOCUMENT IS THE PROPERTY OF DESIGN AND REUSE S.A..
UNAUTHORIZED COPYING, REPRODUCTION, SELLING BY ANY MEANS ARE STRICTLY FORBIDDEN. THE
RECIPIENT UNDERTAKES NOT TO DISCLOSE THE INFORMATION CONTAINED IN THIS DOCUMENT.

IN THIS ISSUE.

This quarterly report is targeted to present a general picture of the IP/SOC market through the analysis of the user activities at the D&R web portal during the related period. Presently the D&R website has for the first time received over 100 000 page views per month (EETimes statistics) and has over 30,000 identified and profiled users worldwide. For an IP provider, EDA provider or design house, if you have not joined the D&R partner community and want to know what D&R could do for you, please contact us at mktg@design-reuse.com. We are open for any cooperation proposals.

To sum up, this report will cover the following topics:

<i>D&R User Profile</i>
<i>Silicon IP/SoC Catalog</i>
<i>B2B Matching – IP Search/Find Club</i>
<i>Verification IP Catalog</i>
<i>Software IP Catalog</i>
<i>Design Services Marketplace</i>

Best regards,

*Gabriele Saucier
Philippe Coeurdevey*

* To know more about the D&R partner program, please see URL:

<http://www.us.design-reuse.com/partners/program/agreement.pdf>

I. D&R User Profile

The numbers presented in this report are based on the 2154 new users registered between October 1st and December 31^h 2003.

1 - Geographic Distribution

This quarter shows that Asia has consolidated its leading position in terms of "technology watcher" in the IP /SOC field and reaches for the first time 38 % of the audience European attention has come back from 21% to 25% whereas US went down from 34 to 30%

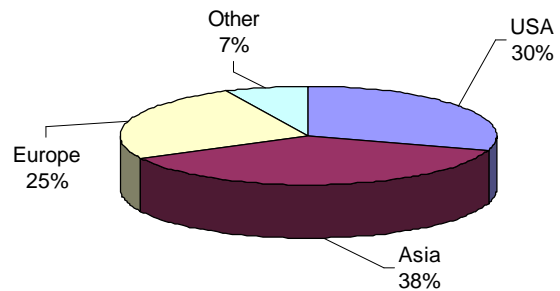


Figure 1 : Geographical distribution(Q4 2003)

2 – Application Field

These numbers are quite stable all over the year More than half of the new users (53%) still come from the following two leading application fields:

- *Communication Systems*
- *Computers, Systems, Peripherals*

The components area decreased somewhat its attention (14% to 12%) whereas the avionics and military field attention is more present; this may correspond to a design activity ramp up in these fields

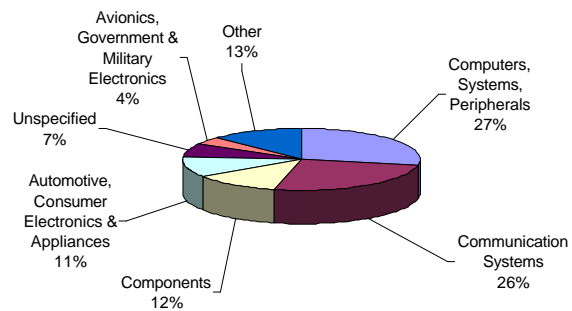


Figure 2 : Application Field (Q4 2003)

3 – Corporation Size

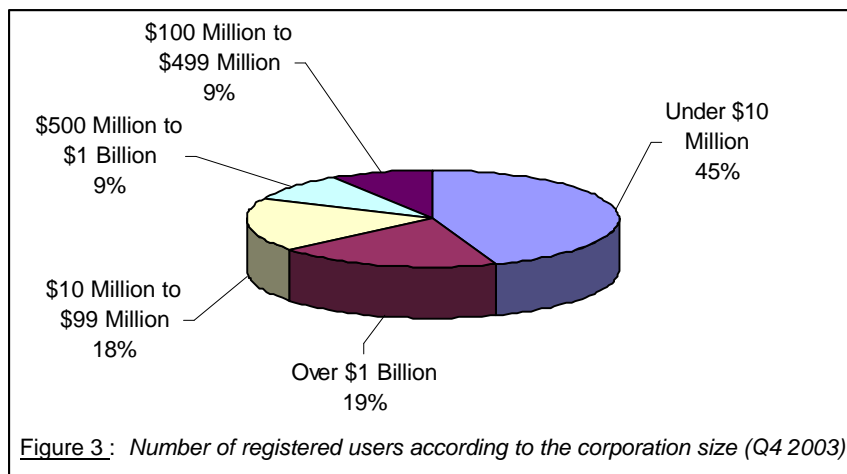


Figure 3 : Number of registered users according to the corporation size (Q4 2003)

Like in the previous quarters there is a balanced distribution between large companies (over\$ 500M revenues with 47 % of the participation) and small medium sized companies (under 10 Millions with 43% of the participation). This latter fraction includes of course most of the IP providers and design centers whereas the large ones represent the clients

4 – Registered Users Position

User profile analysis shows that a stable fraction (60%) of the new D&R users work in the design engineering and R&D fields while 20% are at a senior management level. It is interesting to notice that at a management level the distribution is spread over diversified sectors such as CEO, sales VP, marketing VP, analyst, procurement etc..

Company Size Job Function	1 - 5	6 - 19	20 - 49	50 - 99	100 - 499	500 - 999	1,000 - 4,999	5,000 or More	Unspecified	Total
Design Engineering	53	62	57	66	85	26	67	116	388	920
Research/Development	14	6	6	12	19	8	17	41	80	203
Engineering Student	20	8	7	9	4	1	10	12	106	177
Sales/Marketing	5	9	8	12	27	5	9	18	42	135
CEO/Chairman/President	28	22	6	2		1		3	30	92
VP/Director/Chief of Design Engineering	2	9	10	9	9	3	2	7	18	69
Technology	4	5	2	4	5	3	2	6	33	64
Executive/Senior/Corporate Vice President/Director	7	7	10	3	6		1	1	17	52
CTO/VP/Director of Technology	5	4	3	3	5		3	2	17	42
VP/Director of Sales & Marketing	1	5	4	7	9	1	3	2	5	37
VP/Director of Research/Development	1	3	1	2	6	1	2	2	5	23
Process Engineering		1		1	1		1	1	11	16
COO/VP/Director of Operations	1	1	1	1				1	8	13
Operations	1				1			1	8	11
Financial Analyst	1				3			1	4	9
Unspecified									8	8
Supply Chain	1		1		1				4	7
Purchasing/Procurement	1		2		1	1			2	7
Materials	1						1	1	4	7
Manufacturing/Production	1	1						1	4	7
Logistics	1		1					1	2	5
CFO/VP Finance/ Controller	1	2	1						1	5
Buyer/ Agent/ Specialist /Planner		1	1	1				1	1	5
VP/Director/Chief of Process Engineering			1		1	1			1	4
CTO/VP/Director of Technology	1							1	2	4
VP/Director Purchasing/Procurement			1						2	3
VP/Director Manufacturing/Production							1		2	3
Other/ Unspecified	18	7	1	4	8	2	5	4	177	226
Total	150	146	123	132	183	51	119	219	805	2154

Table 1 : Registered Users Position

II. Silicon IP / SoC Catalog

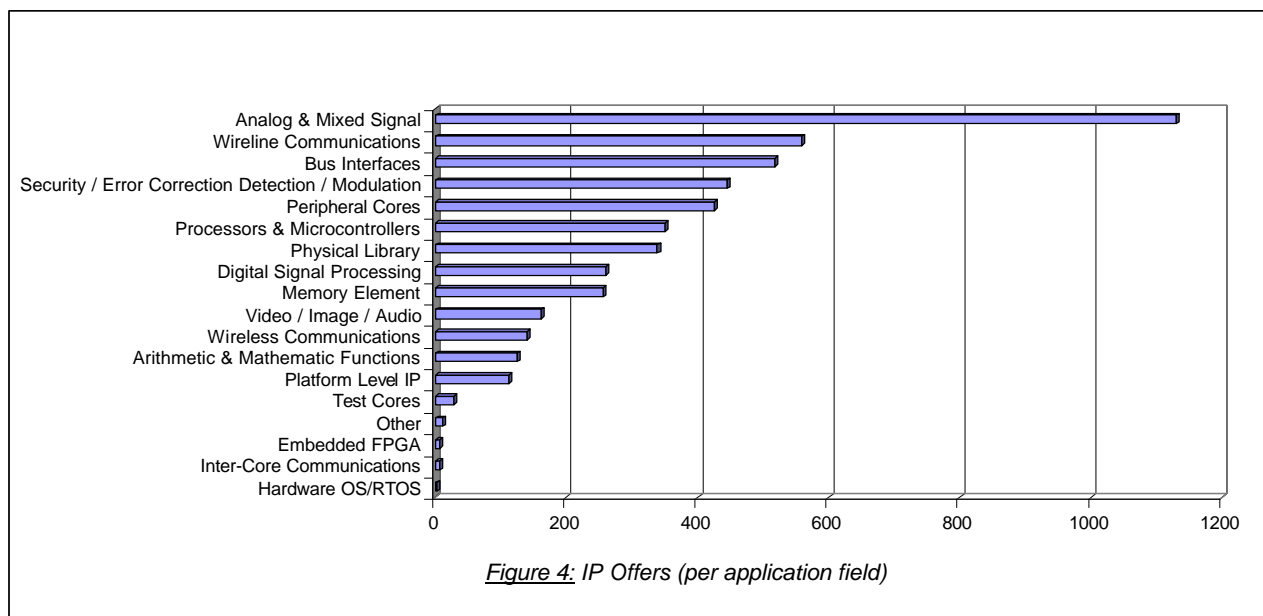
URL: <http://www.us.design-reuse.com/sip>

This section analyzes the supply-demand status of the SIP/SoC market space based on the user activities under the SIP/SoC Catalog of the D&R web portal in Q4 2003.

1 .IP Offers (per application field)

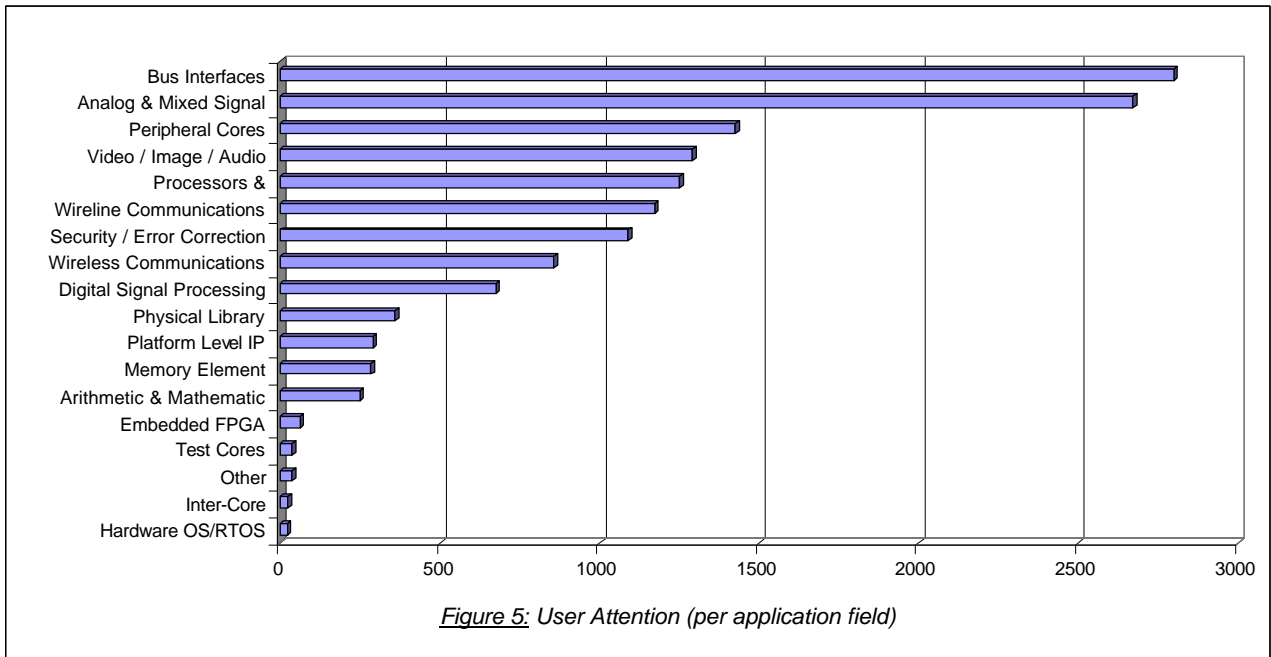
Below is the distribution chart of the large set of IPs namely 4 211 IPs offers listed under the D&R catalog in Q4 2003. An increase of 5% of the number of the IP listed shows the vitality of the IP sector. The distribution across application fields stays stable .

Among the top are still the *Analog & Mixed Signal* and this refers to the granularity of the offer description in this field as for instance for some providers the huge variation of the PLL blocks are considered as a set of individual IPs.



2 – User Attention (per application field)

The chart below presents the different levels of user attention over the respective application fields in Q4, measured by the number of product views. The user attention puts on the top the bus interface IP which is the excellence field of the IP business. The very close position of the analog blocks is certainly related to the remark above.



3 – User Interest (per provider)

The tables below give out a general picture of the market interest over the various vendors worldwide through the number of IP views for users in the D&R web portal in Q4 2003.

A) Group 1: Hottest Providers

If the set of the 4 hottest providers is the same set than last quarter, it can be noticed that Chipidea is just jumping above this set. This may be due to combination of 2 elements namely the application field with the above remark about listing Analog block instances instead of generic IPs and Chipidea 's continuous aggressive marketing campaign (nearly one new product per week). The other 3 vendors follow closely: Cast, Mentor and Synopsys. Note that Synopsys is outperforming Mentor this time.

Provider	Number of Product Views (between Oct. 1 -> Dec. 31)
ChipIdea Microelectronics SA	974
CAST, Inc.	597
Synopsys, Inc.	494
Mentor Graphics (IP Division)	443

Table 2 : IP Providers attracting user attention (over 400 product views)

B) Group 2: top winners (over 200 product views)

In the heading group 2 companies respectively Cadence and Actel maintain their leading position, but ParthusCeva which has now become Ceva has gone down to a lower class. Jennic is a well positioned outsider in this group maintaining a gap with the next group this is due to a dynamic renewal of their IP offer. Faraday and sci-worx succeed to stay over 200.

Provider	Number of Product Views (between Oct. 1 -> Dec. 31)
Cadence Design Foundry	322
Actel Corporation	318
Jennic Ltd	275
Faraday Technology Corporation	221
sci-worx GmbH	221

Table 3 : *IP Providers attracting user attention (over 200 product views)*

C) Group 2: between 100 to 200 product views

The next group is widely spread among diversified types of players and gathers the most well known IP providers. On the top 2 major players (Global Unichip and Qualcomm Logic (previousy Leda Systems)) are for a long time leader players in this field while True circuit makes a strong progression due to the launching of their PLL Delay-Locked Loop Hard Macros.

Provider	Number of Product Views (between Oct. 1 -> Dec. 31)
Global UniChip Corp.	195
LEDA Systems - Now QualCore Logic Analog	194
True Circuits, Inc.	183
NewLogic Technologies	178
LSI Logic Corporation	167
Ceva, Inc.	167
Silicon & Software Systems Ltd.	158
Dolphin Integration	156
ARM Ltd.	155
Barco Silex	150
Wipro Technologies	141
Artisan Components, Inc.	134
Amphion Semiconductor	134
Palmchip Corporation	133
Rambus Inc	128
Altera Corporation	127
Eureka Technology, Inc.	127
Aurora VLSI, Inc.	119
ControlNet (India) Pvt. Ltd.	119
Digital Core Design	118
LSI Design and Integration Corp. (LDIC)	114
IndigoVision Ltd	111
Elliptic Semiconductor	107
Vesta Corporation	105
GDA Technologies	104
DCM Technologies Limited	102
Nordic VLSI ASA	101
Virtual Silicon	100

Table 4 : *IP Providers attracting user attention (number of product views between 100 and 200)*

D) Group 3: between 50 and 100 product views

Provider	Number of Product Views (between Oct. 1 -> Dec. 31)
Rubber Band Ltd	99
Cambridge Consultants Ltd.	97
Ericsson Technology Licensing AB	93
ASICS World Services	91
Unive, Inc.	89
Specsoft Consulting (A Division of Hexaware Technologies)	86
TriCN, Inc.	86
Innovative Semiconductors, Inc.	86
Alcahest Ltd	86
Astro Semiconductor, Inc.	85
Silicon Image	84
R&D Technologies Ltd.	82
Inicore, Inc.	79
MindTree	78
Sarnoff Corporation	78
Imagination Technologies Group plc	78
#1 IP-Cores	78
ARC International	76
Coreworks, Ida	75
Sancom Technologies Pvt Ltd.	75
MIPS Technologies, Inc.	73
MetaVideo, Inc.	70
QualCore Logic, Inc.	69
Arasan Chip Systems	68
The Athena Group, Inc.	66
Next Sierra, Inc.	65
MorethanIP GmbH	65
Tanner Consulting & Engineering Services	64
e-MDT, Inc.	64
Verisilicon, Inc.	63
Virage Logic Corporation	62
Evatronix SA	62
Zoran Corporation	61
SliceX Inc.	61
Thales Electronic Engineering GmbH	59
Xilinx, Inc.	58
Ittiam System (P) Ltd	56
RichCore Technology, Inc.	56
MemecCore	55
SOISIC	55
Soft Mixed Signal Corporation	55
Silicon Cores - a Div. of Silicon Interfaces	54

Snowbush Microelectronics	52
Sidsa	51
Xignal Technologies AG	50

Table 5: IP Providers attracting user attention (number of product views between 50 and 100)

4 – Specific IP Interest

This part gives out the distribution of the market interest over individual IP offers in Q4 2003.

A) Products with demo model download :

The Cast IP stays on the top for nearly a full year and the importance of free Download process is confirmed

The **C8051 - 8-Bit Microcontroller Unit** (Processors & Microcontrollers) of **CAST, Inc.** received 246 product views in Q4 2003 .

Number of Product Views (between Oct. 1 -> Dec. 31)	Product name	Description	Provider
232	C8051	8-Bit Microcontroller Unit	CAST, Inc.

Table 6: Products with demo model download

B) Group 1: over 30 product views

The hot products remain related to new standards ;

A strong winner is the Mpeg4 from IndigoVision followed by the USB.2 On-The-Go block from Chipidea and the AMBA DMA controller of Synopsys. The need for these new IPs are tightly linked to emergence of new standards (USB OTG, 802.11, PCI Express, etc...)

Overall in this list smaller players providing dedicated products such as Oregono or players in new technology (SOI) such as Soisic appear.

Number of Product Views (between Oct. 1 -> Dec. 31)	Product name	Description	Provider
111	Mainstream MPEG-4 Codec	MPEG-4 Encoder & Decoder	IndigoVision Ltd
74	CI12326tg	USB2.0 OTG LS/FS/HS 3.3/1.8 UTMI+	ChipIdea Microelectronics SA
70	DW_ahb_dmac	AMBA 2.0 AHB Central Direct Memory Access (DMA) Controller	Synopsys, Inc.
63	WiLD 802.11a/b/g multi-band CMOS Radio - digital	Dual Mode Multi Band WLAN Transceiver core	NewLogic Technologies
63	PCI Express	PCI Express Initiator / Target	DCM Technologies Limited
61	EC310	PCI-Express Bus Controller	Eureka Technology, Inc.
57	802.11a/b/g-Analog	WiLD 802.11a/b/g dual band CMOS Radio - Analog	Mentor Graphics (IP Division)
55	EZ-SOI	A complete set of standard cells, IOs, SRAMs, and analog/RF functions optimized for SOI processes	SOISIC

52	SPCOTG20	USB 2.0 OTG Controller	Specsoft Consulting (A Division of Hexaware Technologies)
46	CUSB2-OTG	USB On-The-Go Controller	CAST, Inc.
43	Rambus® RaSer™ XAUI 10GbE & 1000BASE-X GbE Serial Link PHY	Serial link/SerDes PHY IP cell/hard macro for XAUI 10 Gigabit Ethernet and 1000BASE-X Gigabit Ethernet controller applications	Rambus Inc
43	CLP-10 802.11i AES core	AES Encryption and Decryption Core specifically for 802.11i	Elliptic Semiconductor
42	AES IP Core	AES IP Core	Oregano Systems
42	UAPC-5100	DMA Controller	Global UniChip Corp.
41	RDEMC - Embedded SDRAM/NandFlash Controler	Memory Controller for embeded systems supporting SDRAM and NandFlash, with bootstrap loader	R&D Technologies Ltd.
41	VMODEXP	Modular exponentiator for RSA, Diffie-Hellman, etc.	Vesta Corporation
41	RC1480	MPEG-1/2/4 Audio / Video Encoder Core	RichCore Technology, Inc.
40	J-SPI-5	SPI-5 Interface	Jennic Ltd
40	Platform8051	8-bit Embedded Systems Platform	Actel Corporation
39	J-SAR-3G	ATM SAR for 3G Basestations	Jennic Ltd
39	NXS5000	MPEG-2 Encoder/Decoder	Next Sierra, Inc.
36	H.264	H.264 Video Decoder	PixSil Technology
36		NTSC/PAL Encoder	Chipsbrain Co., Ltd.
36	Rambus® RaSer™ PCI Express™ Serial Link PHY	PCI Express serial link/SerDes PHY IP cell/hard macro	Rambus Inc
35	Flip-SpRAM-LP-0.25	Low-power Single-Port RAM	Dolphin Integration
35	MVIP2030	Adaptive 3D Decoder Module	MetaVideo, Inc.
35	USB-OTG2	USB 2.0 (FS & HS) On-The-Go IP Core	ASICS World Services
34	ZSP400	Low cost Licensable Digital Signal Processor Core	LSI Logic Corporation
34	MIPS32 24K Family	8-stage pipeline and up to 550-MHz performance 32-bit synthesizable core family	MIPS Technologies, Inc.
34	San11aM	802.11 MAC	Sancom Technologies Pvt Ltd.
34	CI12313wg	USB2.0 AFE LS-FS-HS 3.3-1.8 ETR	ChipIdea Microelectronics SA
33	VPRNG	Pseudo-Random Number Generator	Vesta Corporation
32	iniLDCD	LCD Controller	Actel Corporation
32	dwcore_usb2_phy	DesignWare USB 2.0 Transceiver Macrocell Interface (UTMI) PHY	Synopsys, Inc.
32	MPEG-4	Video Encoder	CAST, Inc.
32	MPEG-4 Video	MPEG-4 Video	Thales Electronic Engineering GmbH
31	VCA2	Cryptography Accelerator - DES, 3DES, AES, MD5, SHA1, SHA256, HMAC	Vesta Corporation
31	CI12320tg	USB2.0 OTG LS/FS 3.3/1.8	ChipIdea Microelectronics SA
30	CI12316kg	USB2.0 PHY FS/HS 3.3/1.8/1.8 UTMI	ChipIdea Microelectronics SA

Table 7 : Products attracting user attention (number of product views over 30)

C) Group 2: between 20 to 30 product views

Number of Product Views (between Oct. 1 -> Dec. 31)	Product name	Description	Provider
29	T-CS-PE-0010-100	LCD Controller	Cadence Design Foundry
29	LEON2	32-bit SPARC V8 processor	Gaisler Research
29		I2S Controller	GDA Technologies
28	Xpert-Connect™-FC/GE-1G/2G	Fibre Channel / Gigabit Ethernet	Ceva, Inc.
28	Hantro 4250	HW MPEG-4 Encoder	Hantro Products Oy
27	SNaP-01	Security and Network Processor for Edge Applications	Elliptic Semiconductor
26	JAIPUR	Video rate, Line Based JPEG2000 Encoder	Rubber Band Ltd
26	dwcore_pci_express	DesignWare Synthesizable PCI Express Core	Synopsys, Inc.
26	Xpert-Connect™-SATA-1.5G	Serial ATA complete solution, including Link/Transport protocol and PHY	Ceva, Inc.
25	RBSOX0100	MP3 Decoder	Rubber Band Ltd
25	CI3342tg	10bit 12Ms/s Pipeline ADC	Chipldea Microelectronics SA
25	BK-3710S	Ultra IDE Host Controller with SpeedSelect	Palmchip Corporation
25	S3AD1M8BC35	8-Bit 1MSPS Algorithmic ADC	Silicon & Software Systems Ltd.
25	SATALink PHY Core	Dual-channel SATA PHY Core	Silicon Image
25	AE_SDR_SDRAM	Mobile SDRAM Memory Controller	Array Electronics
25	C6811	8-bit Microcontroller	CAST, Inc.
24	PLDA PCIEXPRESS-IP	PCI Express IP Core	PLDApplications (PLDA)
24	SL200	USB 2.0 Mixed-signal Transceiver	Innovative Semiconductors, Inc.
24	Moustique	Block accelerator	Silicon Hive
24	CNI_PCI_002	PCI 2.3 Master-Target	ControlNet (India) Pvt. Ltd.
24		NTSC/PAL Encoder	Sarnoff Corporation
24	RMCU1	RISC MCU	#1 IP-Cores
24	DMC 900	Fully-integrated high-performance on-chip clock	Mobius Microsystems Inc.
24	MUSBHSFC	USB 2.0 High/Full Speed Function Controller	Mentor Graphics (IP Division)
23	Rambus® RaSer™ 622Mbps - 3.2Gbps Serial Link PHY	622Mbps - 3.2Gbps Serial link/SerDes PHY IP cell/hard macro	Rambus Inc
23	FZUSB200HA0A	USB 2.0 PHY	Faraday Technology Corporation
23	CUSB2	USB 2.0 Device Controller	CAST, Inc.
23	J-MS-LVDSCLM	Combined CML/LVDS Transceiver	Jennic Ltd
23	AD12b2V50M-13	12-Bit 2Vpp Input 50MSPS 1.2V & 2.5/3.3V Analog-to-Digital Converter	Alpine Integrated Circuit Innovations, LLC
22	CI13309za	MP3 Decoder	Chipldea Microelectronics SA
22	BOOST Core	Bluetooth baseband core	NewLogic Technologies
22	UAPC-6100	Compact Flash Card Interface	Global UniChip Corp.
22	BOOST Core	Bluetooth Baseband Processor Core	Mentor Graphics (IP Division)
22	San11gP	802.11g Physical layer	Sancom Technologies Pvt Ltd.

22		PCI Express Controller	GDA Technologies
21	ARC 600	Configurable Processor For Power-Sensitive Embedded Systems	ARC International
21	DW_fir_seq	Sequential Digital FIR Filter Processor	Synopsys, Inc.
21	FXPLL110HD0G	100-1000Mz output, high speed PLL	Faraday Technology Corporation
21		802.11g Baseband Controller	Wipro Technologies
21	DWC_sd_mmc	Secure Digital Multimedia Card Host	Synopsys, Inc.
21	S3PLLPROGC18	30-550 MHz Programmable Low Noise PLL	Silicon & Software Systems Ltd.
20	PowerVR TVE	digital TV encoder outputs PAL or NTSC encoded Composite video and simultaneous S-Video, or RGSB or YUV component video for TV display when connected to a pixel display pipeline such as PowerVR PDP	Imagination Technologies Group plc
20	MOSAID DLL	MOSAID DLL with programmable phase output	Mosaid Semiconductor
20	MPCIEp-EPx	PCI Express Endpoint Controllers	Mentor Graphics (IP Division)
20	SP-SATA-IP103	Serial ATA IP Core	Spike Technologies Inc.
20	SMIC15-PLL-0001	SMIC 0.15um PLL	Verisilicon, Inc.

Table 8 : Products attracting user attention (number of product views between 20 and 30)

D) Group 3: between 15 to 20 product views

Number of Product Views (between Oct. 1 -> Dec. 31)	Product name	Description	Provider
19	T-CA-SD-0013-100-TU13	PCI Express SerDes Macro	Cadence Design Foundry
19	T-CA-AD-0009-100-TU13	10 Bit 100 MHz Pipelined ADC	Cadence Design Foundry
19	CI12265qa	USB2.0 PHY Transceiver Macrocell	Chipldea Microelectronics SA
19	Ericsson Core Bluetooth Baseband Platform Q-E1	Bluetooth baseband licensing package fully scalable to suit any device	Ericsson Technology Licensing AB
19		Wireless LAN Baseband Core (IEEE 802.11b)	MindTree
19	ARM1156T2-S	Processor for Network Infrastructure, Consumer, and Automotive Infotainment	ARM Ltd.
18	EFPU1	Enhanced Floating Point Unit	#1 IP-Cores
18	S3AD50M14BC18	14 Bit 50 MSPS Sigma-Delta ADC	Silicon & Software Systems Ltd.
18	SMS2300	USB 2.0 OTG On-The-Go Transceiver	Soft Mixed Signal Corporation
18	UV18900	1.8V Voltage Regulator (Vcc=3.3/2.5V, Vout=1.8V, Iout=150mA)	Unive, Inc.
18	T-CS-EN-0017-100	Secure Digital IO and Memory Card Interface	Cadence Design Foundry
18	CascadeXpress	PCI-Express IP Solutions	Cascade Semiconductor Solutions, Inc. (CSSI)
18	dwcore_usb2_host	DesignWare USB 2.0 Host Controller (UHOST2)	Synopsys, Inc.
18	AT7816L1	SmartCard Reader	Atout Technologies
18	CWda05	SPDIF-AES/EBU Transmitter	Coreworks, Ida
18	aac	MPEG-4 AAC	Thales Electronic Engineering

			GmbH
18	LIP	LCD Controller	Sidsa
18	CI13305za	I2S Interface	Chipldea Microelectronics SA
18	ASB-F012	Low Power 1.5 Gb/s Serial ATA (SATA) PHY	Astro Semiconductor, Inc.
18	CVE2	NTSC/PAL Video Encoder	Zoran Corporation
18	BA119	High Speed Baseline DCT-JPEG CODEC	Barco Silex
18	CI12295ug	USB2.0 On-The-Go PHY	Chipldea Microelectronics SA
18	PLT3000 (GPLEXCHIP)	10/100/1000 PHY .18u	Plato Labs, Inc.
18	HCORE	Host-Side SATALink™ Cores	Silicon Image
18	WILD 802.11g Modem	IEEE 802.11g OFDM modem (PHY) for integration into Wireless LAN standard ICs and ASICs	NewLogic Technologies
17	DDR-FCRAM-II	SSTL-18 I/Os targeted for DDR-FCRAM II applications	TriCN, Inc.
17	BA511	MP3 decoder - Low power / ISO 11172-3 (MPEG1-LayerIII)/ MPEG2-Layer III	Barco Silex
17		802.11b Baseband Controller	Wipro Technologies
17	RDSP1	RISC DSP	#1 IP-Cores
17	LD-ATA-0017-050	Flash Controller	LSI Design and Integration Corp. (LDIC)
17	BK-3720	Serial ATA Device Controller	Palmchip Corporation
17	Core10/100	Ethernet MAC Controller	Actel Corporation
17		USB 1.1 Device Controller Core	Wipro Technologies
17	MP3CORE	MP3 Decoder	Avedis Microsystems
17	dwcore_usb_otg	DesignWare USB 2.0 Full Speed On-The-Go Controller Subsystem	Synopsys, Inc.
17		Artisan OpalLink PCI Express PHY Core	Artisan Components, Inc.
17	CI12318tg	USB2.0 PHY LS/FS/HS 3.3/1.8/1.8 UTMI+	Chipldea Microelectronics SA
17	CLCDmodule	Color LCD Controller	Inicore, Inc.
17	Xpert-Connect™-LVDS	flexible, low power LVDS serdes IP core	Ceva, Inc.
17	ICC	Smart Card Interface with internal APB interface	sci-worx GmbH
17	S3AD40M10BC18	10 Bit 40 MSPS Pipeline ADC	Silicon & Software Systems Ltd.
17	ZSP500	16 bit instruction 16/32/64 bit data configurable DSP core	LSI Logic Corporation
17	CI12323tg	USB2.0 OTG LS/FS/HS 3.3/1.8/1.8 UTMI+	Chipldea Microelectronics SA
17	Ericsson Core Bluetooth Baseband Q-E3	A small and complete, optimized embedded Bluetooth HID solution based on Bluetooth 1.2 for meeting low power consumption requirements.	Ericsson Technology Licensing AB
16	PanelLink Cinema™ Cores	HDMI 1.0 compliant PanelLink Cinema Cores	Silicon Image
16	ZSP600	16 bit, six-way instruction, configurable DSP Core	LSI Logic Corporation
16	GL230	PCI Express PIPE (PHY Interface for PCI Express) PHY	Genesys Logic, Inc.
16	ACS-SDD	Secure Digital (SD) I/O (SDIO) Controller Core	Arasan Chip Systems
16	BK-3721	Serial ATA Device Controller with DMA	Palmchip Corporation
16	RIO CARIBE	YCrCb to RGB Converter	Rubber Band Ltd

16	eFPU	Enhanced Floating Point Unit	ASICS World Services
16	tk	IPSec ToolKit	Alcahest Ltd
16	triple_speed_MAC_10_100_1000	10/100/1000 Mbps Ethernet Media Access Controller	XON srl
16	M4ME	MPEG4 Motion Estimation	sci-worx GmbH
16	CI2065ka	DC-DC-Converter	Chipldea Microelectronics SA
16	Databahn	Configurable Memory Controller Cores for: DDR / DDRII-SDRAM, FCRAM, RLDRAM, DDR / QDR-SRAM	Denali Software, Inc.
16	ARM7TDMI	32-bit RISC core processor	ARM Ltd.
16	logiCVC	Compact Video Controller	Xylon
16	FEDP110HA0A	10/100 Fast Ethernet Digital PHY	Faraday Technology Corporation
16	BA312	DDR SDRAM Controller	Barco Silex
16	Ericsson Core Bluetooth Baseband Q-D1	Low-powered Bluetooth Baseband System-on-Chip Intellectual Property for cost effective implementation in mobile phones	Ericsson Technology Licensing AB
16	CI10142oa	Bluetooth RF Transceiver	Chipldea Microelectronics SA
16	CNI_USB_001	USB 2.0 Digital Transceiver	ControlNet (India) Pvt. Ltd.
16	CNI_USB_002	USB2.0 EHCI IP Core	ControlNet (India) Pvt. Ltd.
16	MUSBHDC	USB Hi-Speed Dual-Role Controller	Mentor Graphics (IP Division)
15	WiLD 802.11a/b/g multi-band CMOS Radio - analog	WLAN dualband radio IP core	NewLogic Technologies
15	CEVA-X1620	Dual MAC 16-bit fixed point DSP	Ceva, Inc.
15	J-AES-COP	AES Co-processor	Jennic Ltd
15	DERWENT	Line Based 2D-DWT Processor for JPEG2000	Rubber Band Ltd
15	802.11 a/b/g MAC	WiLD 802.11 a/b/g MAC Controller and Protocol Software	Mentor Graphics (IP Division)
15	BOOST Radio	Bluetooth radio transceiver 2.4GHz	NewLogic Technologies
15	BA313	Flash Controller	Barco Silex
15	Amphion CS676x	MPEG-4 Video Decoder Accelerators	Amphion Semiconductor
15	CWda03	SPDIF-AES/EBU to I2S Converter	Coreworks, Ida
15	dwcore_jpeg2_encod	DesignWare JPEG2000 Encoder	Synopsys, Inc.
15	T-CS-NW-0003-100	PCI Express Digital Core	Cadence Design Foundry
15	Hantro 4150	HW MPEG-4 Decoder	Hantro Products Oy
15	LDVR3-18T	Voltage Regulator, 3.3V to 1.8V	LEDA Systems - Now QualCore Logic Analog
15		PowerPC 440 CPU Core	IBM
15		Smart Card Interface	GDA Technologies
15		Sigma-Delta ADC/DAC Converters	Tanner Consulting & Engineering Services
15	GT3100	USB 2.0 Transceiver Macrocell	Standard Microsystems Corporation (SMSC)
15	imaging	Digital Imaging and Camera Products Analog Front End	Simple Silicon, Inc.
15	MP3-SO1	MP3 decoder ASIC core (Silicon Proven)	Silicon Ocean Ltd.
15	CW000506	GigaBlaze SERDES transceiver core, X4, For Fibre Channel, PCI-Express, XAUI, S-RIO, INFINIBAND, SAS, S-ATA, ETHERNET, 10Gb ETHERNET, 10Gb FC	LSI Logic Corporation

15	USB-OTG1	USB 2.0 On-The-Go IP Core	ASICS World Services
15		802.11 a/b/g Multi mode MAC Core	Wipro Technologies
15	ddr_sdram_controller	High-Speed DDR SDRAM Controller	MorethanIP GmbH
15	SP1403	DSP Processor platform for advanced SoC applications	StarCore LLC
15	802.11b Modem	WiLD 802.11b Modem DSSS/CCK Modem/PHY	Mentor Graphics (IP Division)
15	dwcore_usb2_device	DesignWare USB 2.0 Device Controller	Synopsys, Inc.
15	AE_DDR_SDRAM	Optimizing DDR SDRAM Memory Controller	Array Electronics

Table 9 : Products attracting user attention (number of product views between 15 and 20)

II. B2B Matching -- IP Search/Find Club

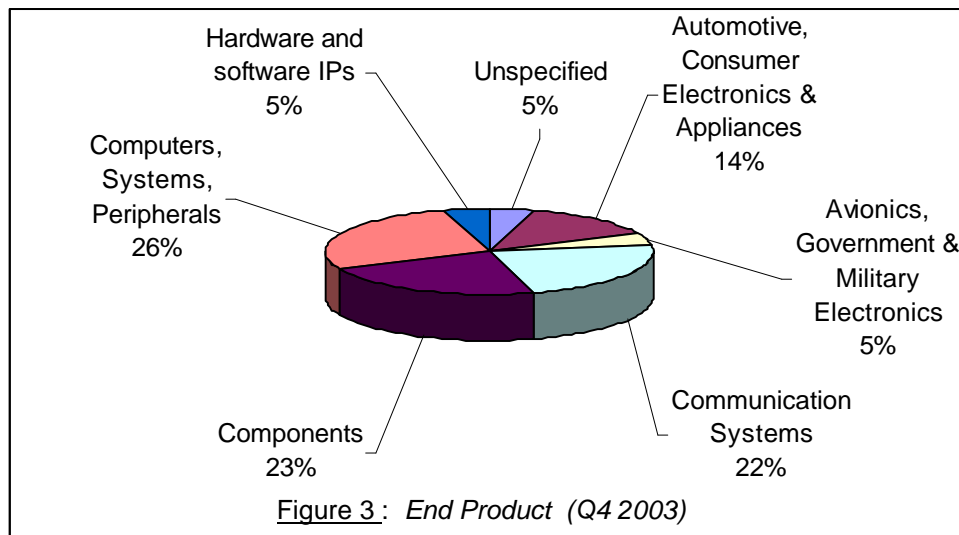
URL: <http://www.us.design-reuse.com/sip/wanted/>

This section analyzes the activities of the IP Search/Find Club in Q2, a B2B matching marketplace for the most urgently needed IP requests.

1 – End Product (application fields) – *Who is looking for an IP?*

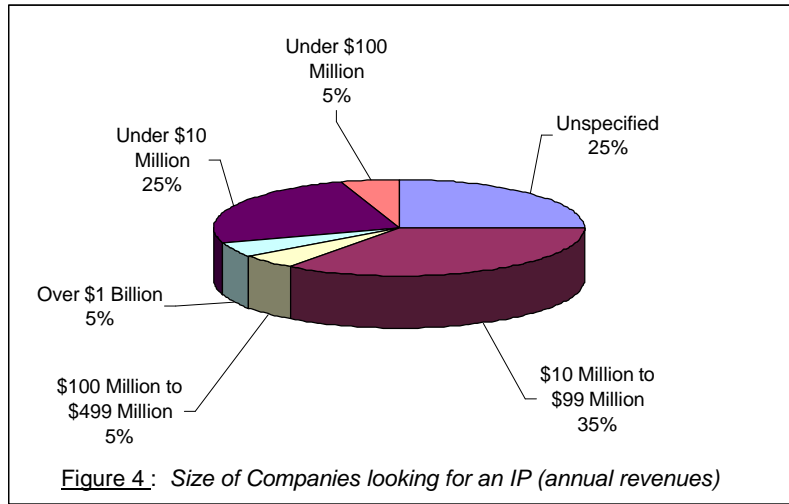
The following chart gives out the application field distribution of the requests posted in this B2B marketplace in Q4 2003 and this profile significantly differs from the one of the previous quarter

Components ramp up from 10% to 23 %, communications from 15 to 22% while Computer system decreased from 45 % to 26% and avionics from 15 % to 5 % :



2 – Size of Companies looking for an IP (annual revenues)

In this quarter the remark of last quarter holds ;Most of the demands come from medium sized companies (\$10 M to \$99 M) This should be the size of a company engaged in ASIC design and willing to subcontract their IP design; In other words large enough to go for IP design and small enough for willing to go as fast as possible to IP based design



3 – Specific IP Requests / Number of Offers Received – How were the IP demands satisfied by the providers?

The following tables display a list of IP demands that received several offers and that more likely triggered business.

The requests cover a broad range from “common” requests (USB,PCI) to very specific ones

Request Summary	# of Offers Received	Posted
USB 2.0 Host Controller	13	Nov. 05, 2003
PCI Express PHY IP	11	Oct. 27, 2003
DDR SDRAM controller	10	Oct. 27, 2003
AFE for video decoder IP	9	Nov. 04, 2003
PCI Express - PCI Reverse Bridge	9	Dec. 12, 2003
Low Rate Voice Compression/Decompression Algorithm	9	Dec. 13, 2003
2D/3D graphic core IP	8	Oct. 01, 2003
10/100Mbps Ethernet PHY IP	8	Oct. 14, 2003
AC-3, AAC, MP3 Encoder SW for MIPS	8	Oct. 28, 2003
Serial ATA Host controller and PHY	7	Oct. 27, 2003
DVI Tx IP core	7	Nov. 14, 2003
TCP offload	7	Dec. 01, 2003
PLL FM Receiver	6	Nov. 17, 2003
Audio IPs	6	Dec. 03, 2003
802.11b PHY+MAC simulation model	4	Oct. 21, 2003
software IP for 2D graphics acceleration	3	Nov. 26, 2003
1394a and 1394b Analog PHY	3	Dec. 03, 2003
SGMII (Serial GMII)	3	Dec. 12, 2003
IP 68000 (MOTOROLA Processor)	2	Dec. 02, 2003
Gigabit Ethernet PHY	2	Dec. 24, 2003
Audio CODEC	2	Dec. 30, 2003
0.35um LVDS with 6kV HBM & 500V MM ESD protection	1	Nov. 07, 2003

Table 10 : Specific IP Requests / Number of Offers Received

4 – Examples of messages posted in the IP Search/Find Club

Asian and Indian participations are very high and this confirms the hot attention captures by D&R site in Asian countries and India

Request Description	Demand Origin
<p>Functionality: USB 2.0 Host Controller</p> <p>External compatibility and integration requirements ISA or memory like interface or DMA interface Host only SIE or PHY are not necessary</p> <p>Technology Requirements TSMC 0.18 um</p> <p>Availability Timing In 2 to 3 three months</p> <p>Support requirement Sample driver on linux or POSIX like embedded OS Associated test bench FPGA verification</p>	<p>Position of the person having emitted the request: Executive/Senior/Corporate Vice President/Director</p> <p>Corporation Profile End Product: Components Gross Annual Dollar Sales: \$100 Million to \$499 Million Size of his organization at this location: 100 - 499 Size of his organization in entire company: 500 - 999 Location: HsinChu, , Taiwan</p>
<p>Summary: 10/100Mbps Ethernet PHY IP</p> <p>Functionality 10/100Mbps Ethernet PHY IP 0.25u in either UMC or TSMC process</p>	<p>Position of the person having emitted the request: Design Engineering</p> <p>Corporation Profile End Product: Communication Systems Size of his organization at this location: 20 - 49 Size of his organization in entire company: 20 - 49 Location: Austin, Texas, United States</p>
<p>Functionality DDR SDRAM controller IP for SoC .13, .18 UMC process Silicon proven</p>	<p>Position of the person having emitted the request: VP/Director/Chief of Design Engineering</p> <p>Corporation Profile: End Product: Computers, Systems, Peripherals Gross Annual Dollar Sales: \$10 Million to \$99 Million Size of his organization at this location: 20 - 49 Size of his organization in entire company: 50 - 99 Location: Hsin Chu, , Taiwan</p>
<p>Functionality Video decoder Analog Front End 10 Bit ADC Silicon Proven or mass product</p>	<p>Position of the person having emitted the request: VP/Director/Chief of Process Engineering</p> <p>Corporation Profile End Product: Computers, Systems, Peripherals Gross Annual Dollar Sales: Under \$10 Million Size of his organization at this location: 20 - 49 Size of his organization in entire company: 20 - 49 Location: Hsin Chu, Taiwan</p>
<p>Summary: PCI Express - PCI Reverse Bridge</p> <p>Functionality The Reverse Bridge Functionality (Able To Do Configuration Generation Cycles) Is Mandatory</p>	<p>Position of the person having emitted the request: Design Engineering</p> <p>Corporation Profile End Product: Communication Systems Gross Annual Dollar Sales: \$10 Million to \$99 Million Size of his organization at this location: 500 - 999 Size of his organization in entire company: 500 - 999 Location: Bangalore, India</p>
<p>Summary Low Rate Voice Compression/Decompression Algorithm</p> <p>Functionality 1. Compress Voice to low rate, such as 1.0kbps, 2.0kbps, 4.0kbps, 4.8kbps or 8.0kbps. 2. Better if could be variable rate compression. 3. The decoder doesn't require a whole lot MIPS, nor</p>	<p>Position of the person having emitted the request CEO/Chairman/President</p> <p>Corporation Profile End Product: Automotive, Consumer Electronics & Appliances Gross Annual Dollar Sales: Under \$10 Million Size of his organization at this location: 50 - 99</p>

<p>SRAM.</p> <p>External compatibility and integration requirements: Would be great if it is TI or ARM7 compatible.</p> <p>Timing or Performance requirements Only the decoder is required to be real time, not the encoder.</p> <p>Technology Requirements Written in C or Assembly.</p> <p>Availability Timing Soon</p> <p>Support requirement Complete documentation.</p>	<p>Size of his organization in entire company: 50 - 99</p> <p>Location: Irvine, California, United States</p>
---	---

Table 11 : Examples of messages posted in the IP Search/Find Club

VII. Verification IP Corner

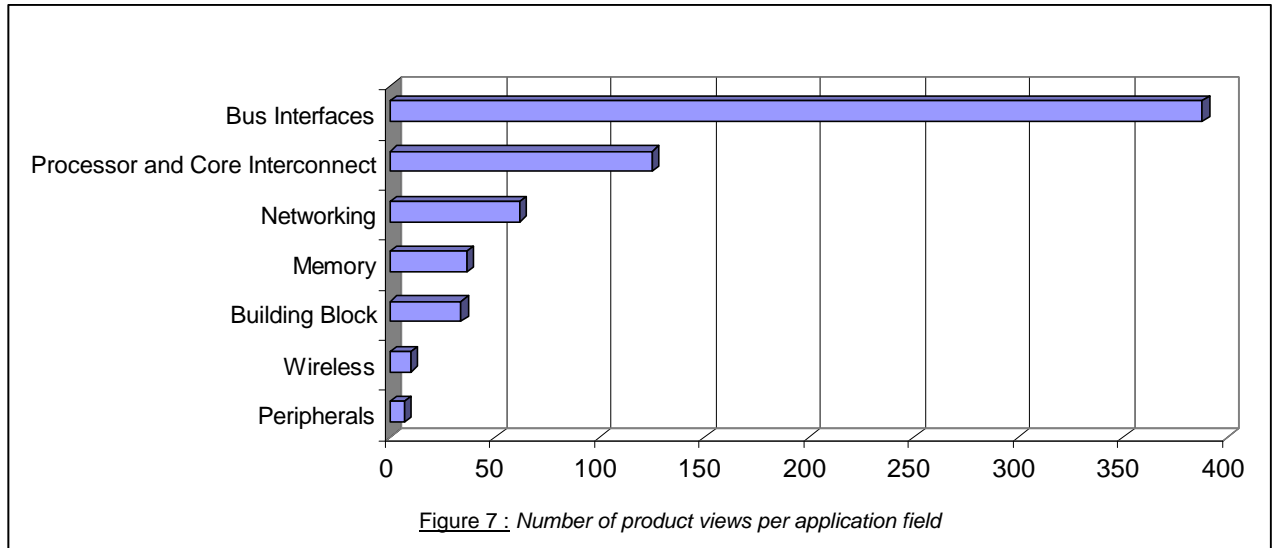
URL: <http://www.us.design-reuse.com/vip/>

In terms of application fields, *Bus interface field* is again quite isolated as the main target of the verification process

Regarding individual providers, *Synopsys*, with the various product families available, is still the incomparable winner in terms of product views. On the other hand, PCI Express verifiers are the hottest IPs whereas hot VIPs are quite new products (SATA, OCP blocks..) from new providers related to these new standards;

User Interest Analysis

A) By Application Field



B) By Provider

As mentioned above Synopsys is the strong leader in this field and this position followed by Macrocad delivering an Amba analyzer

Provider	Number of Product Views (between Oct. 1 -> Dec. 31)
Synopsys, Inc.	147
Macrocad Development, Inc.	109
TransEDA	71
0-In Design Automation	46
Vesta Corporation	35
Expert I/O	30
eInfochips, Inc.	30
nSys	23

Denali Software, Inc.	23
Verity	20
Sidsa	17
IntelliProp Inc.	12
Integology Corporation	10
Zaiq Technologies, Inc	10

Table 12 : Verification IP Providers attracting user attention (top winner)

Specific Verification IP Interest – dual dimensional analysis

The Arm Amba is the most popular verification IP block followed by USB and Sonet analyzer

Number of Product Views (between Oct. 1 -> Dec. 31)	Product name	Description	Provider
42	VSM5203	ARM AMBA AHB Design Verification System Environment	Macrocad Development, Inc.
38	usb_host_vmt	USB 1.1, 2.0 and On-the-Go Host	Synopsys, Inc.
35	SONET/SDH Toolkit	SONET/SDH Generator and Analyzer	Vesta Corporation
30	SATA I SVC	Serial ATA (SATA) System Verification Component	Expert I/O
26	OCP HPK (Hardware Protocol Kit)	The OCP Hardware Protocol Kit automatically creates properties and environment for OCP, enabling quick and exhaustive verification of any OCP compliant hardware design	TransEDA
22	i2c_trx_vmt	DesignWare I2C Verification IP	Synopsys, Inc.
20	VSM3602	PCI Co-Simulation	Macrocad Development, Inc.
18	Amba AHB HPK (Hardware Protocol Kit)	AHB Hardware Protocol Kit automatically creates properties and environment for AHB, enabling quick and exhaustive verification of any Amba AHB compliant hardware design	TransEDA
16	0-In PCI-X 2.0 CheckerWare Monitor	PCI-X 2.0 Monitor for simulation and formal verification	0-In Design Automation
15	VSM3600	PCI v2.2 bus functional models	Macrocad Development, Inc.
14	OCP_eVC	OCP (Open Cores Protocol) eVC for verifying any OCP 2.0 compliant OCP Master and/or Slave device.	eInfochips, Inc.
14	PureSpec	Verification IP for PCI Express	Denali Software, Inc.
12	VSM5200	AMBA AHB Bus Functional Models	Macrocad Development, Inc.
12	VSM5202	ARM AMBA AHB Design Verification Environment	Macrocad Development, Inc.
10		ISO7816-3 Smart Card Interface (SCI) VIP	Integology Corporation

Table 13 : Verification IPs attracting user attention per application field (over 10 product views)

IX. Software IP Corner

URL: <http://www.us.design-reuse.com/hds/>

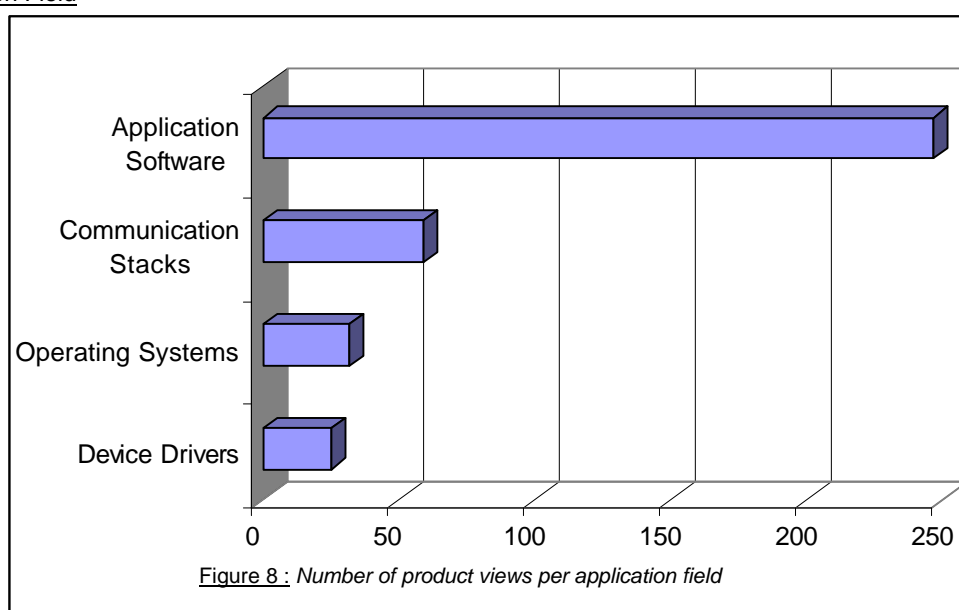
This is a new corner launched last year and covers over 250 software IP offers .

Further analysis below shows that,

- In terms of application fields, the market demands go on in focusing on the *Application Software*.
- In terms of individual providers, *Hellosoft and HCL* technology stay top of the provider list
- in terms of hottest product the Hello IP phone on Arm from Hello soft stays the most attractive

User Interest Analysis

A) By Application Field



B) By Provider

Provider	Number of Product Views (between Oct. 1 -> Dec. 31)
HelloSoft Inc.	42
HCL Technologies	26
Telecom Italia LAB - System On Chip Division	24
eInfochips Inc.	23
Ittiam System (P) Ltd	20
Spirit Corp.	20
QualCore Logic, Inc.	20
Encore Software Limited	15
Comsis	14
Wipro Technologies	14
ARC International	13

Hantro Products Oy	10
Datalight, Inc.	10

Table 14 : Software IP Providers attracting user attention (between 10 to 50 product views)

C) Hottest product

Number of Product Views (between Oct. 1 -> Dec. 31)	Product name	Description	Provider
28	HelloIP Phone (tm)	HelloIP Phone runs on a single ARM Core	HelloSoft Inc.
18	e802.11b Driver	802.11b driver for Nucleus RTOS	elinfochips Inc.
12		Voice/data-over-HF Processor	Spirit Corp.
9		Precise/RTCS TCP/IP Stack	ARC International
7	HelloWLAN (tm)	Industry's Lowest Cost Fully Customizable Wireless LAN IP	HelloSoft Inc.
7	FlashFX®	Flash Media Manager	Datalight, Inc.
6		Nucleus Embedded RTOS	Accelerated Technology
6		MPEG2/4 AAC Encoder & Decoder	Ittiam System (P) Ltd
5		SIP Stack	Encore Software Limited
5	Hantro 4100	SW MPEG-4 Decoder	Hantro Products Oy
5		MPEG4 Encoder	Telecom Italia LAB - System On Chip Division
5	RTIP	Portable TCP-IP Network Stack	EBSnet, Inc.
5	Hantro 4200	SW MPEG-4 Encoder	Hantro Products Oy
5	UBLive-26L-C64	complete video processing solution	UB Video Inc.

Table 15 : Software IPs attracting user attention per application field (over 5 product views)

VII. Design Services Marketplace

URL: <http://www.us.design-reuse.com/designcenter/>

The following table tells the level of market interest over the various design services providers through the figures of product views. *Wipro Technologies* leads, like the previous quarters, the other design service providers


User Interest Analysis – By Provider

Provider	Number of Company profile Views (between Oct. 1 -> Dec. 31)
Wipro Technologies	60
Silicon & Software Systems Ltd.	41
Cadence Design Foundry	26
Synopsys Professional Services	23
HCL Technologies Ltd.	21
ChipIdea Microelectronics SA	18
Silicon Infusion Limited	16
Barco Silex	15
Sidsa	14
Jennic Ltd	14
GDA Technologies, Inc.	13
NewLogic Technologies	12
Expert I/O	11
Accent	10
Sarnoff Corporation	10
Telecom Italia LAB - System on Chip Division	10
LSI Logic Corp.	10
sci-worx GmbH	10

Table 18 : Design Services Providers attracting user attention (over 10 company profile views)

Design And Reuse S.A.

*World Trade Center
5 place Robert Schuman
38025 Grenoble France*

 : +33 476 70 64 87 Fax : + 33 476 70 64 53

E-mail : info@design-reuse.com

<http://www.design-reuse.com>