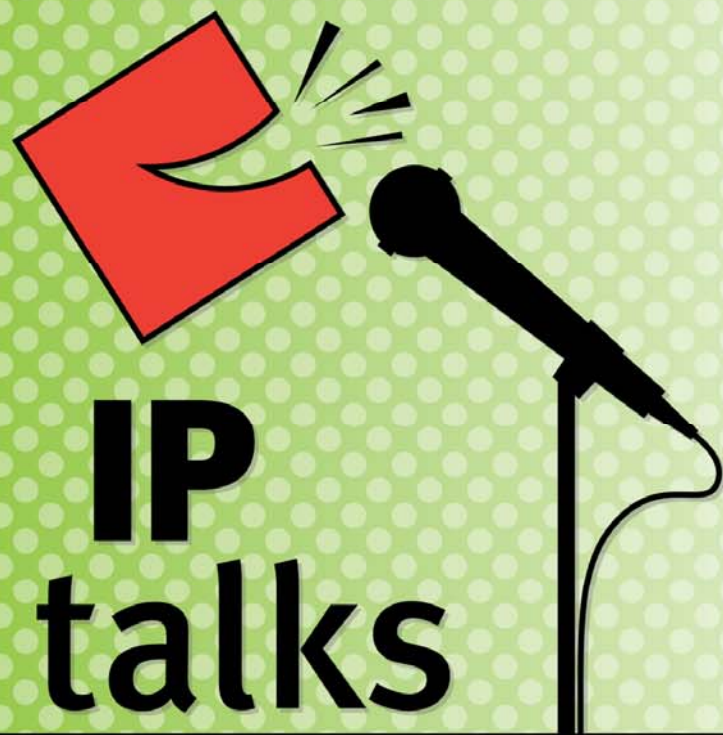


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*Enabling efficient markets for IP
through standards*

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VSIA Value: a Triple Play!



- IP Quality assessment and Improvement
 - QIP Metric
 - Vendor
 - Soft
 - Hard
 - VIP

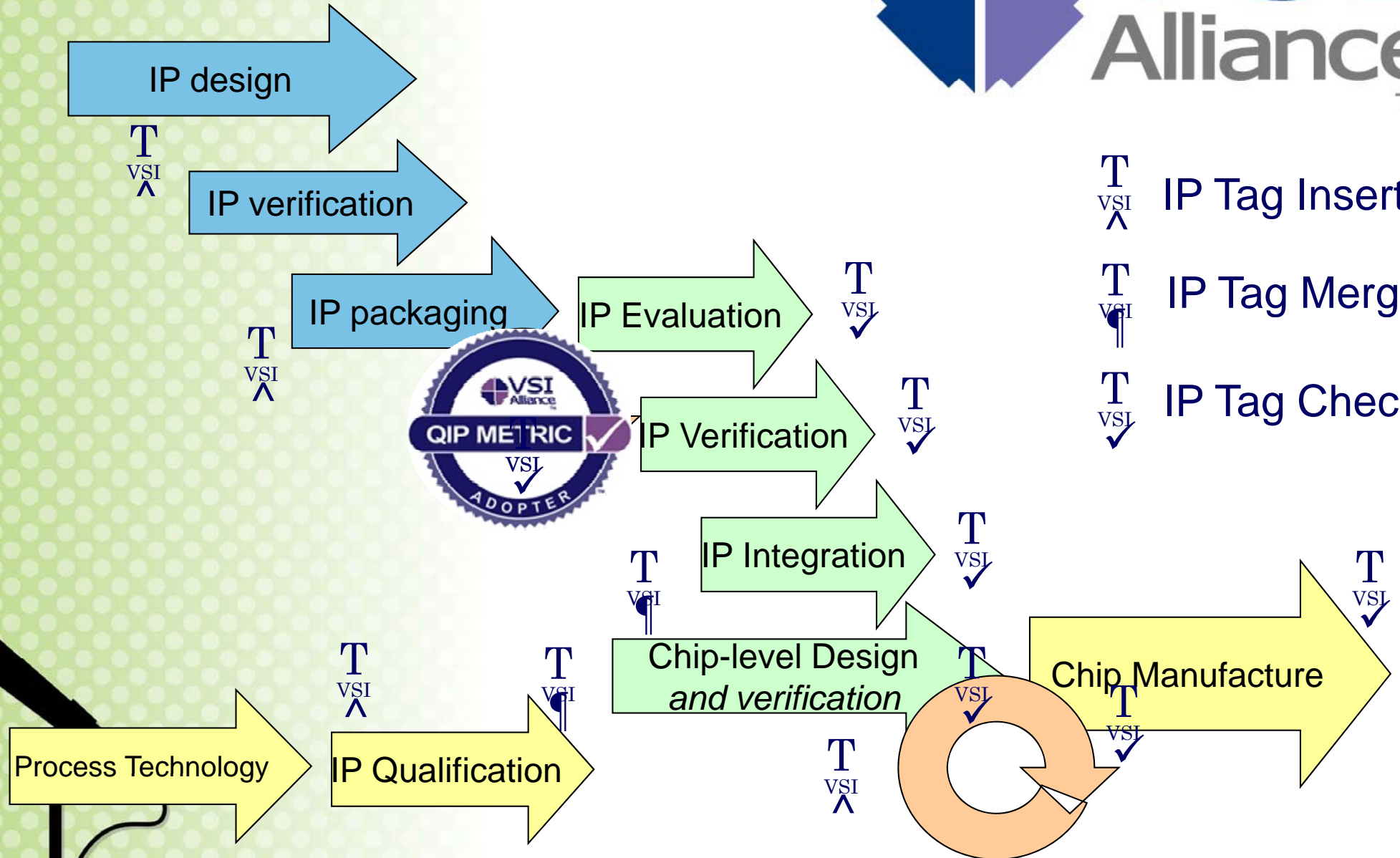


- IP Transfer and Validation
 - BoM/Deliverables Checklist
 - Transfer mechanisms
 - Incremental Delivery



- IP Value Protection
 - Hard and Soft Tagging
 - Encryption
 - Incremental Delivery (trust development)

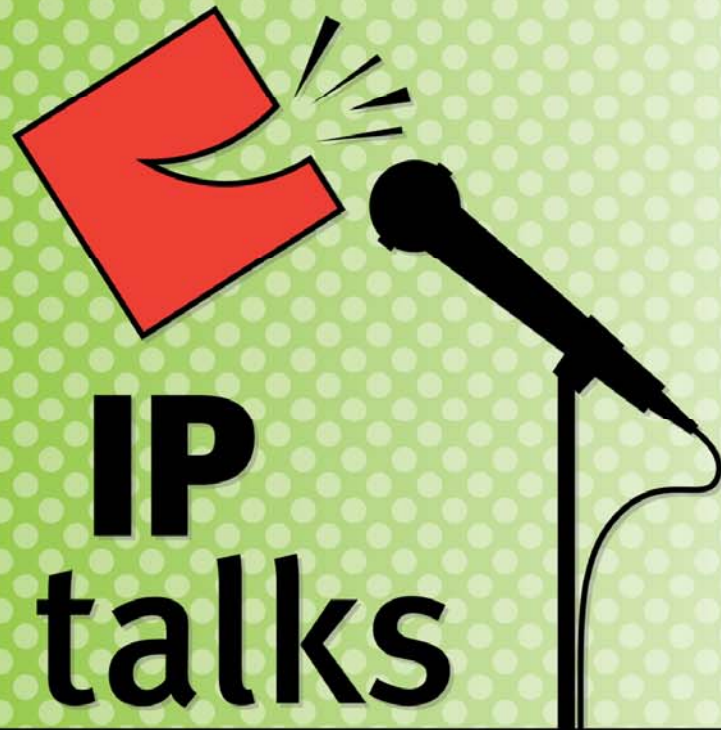
The IP ECO System



VSI

IP Tagging

- Hard
- Soft
- TIPS



- VSI has produced 2 standards for data “tags” in IP:
 - Hard IP tagging: for saving tag information in GDS2
 - Soft IP tagging: for inserting converting and maintaining tags in soft IP on it’s journey to implementation
- The tags contain
 - Producer/Responsible party
 - Version information
 - Tool chain and tool version used
- The tags are used for:
 - Assurance – is the version of IP that is used clear of bugs, are all the deliverables from the same version
 - Provenance/Tracking – Provenance is being able to track the history of an IP
 - Identification – who will fix the bugs? Who is paid, and why?
- The tags provide benefit to:
 - The IP producer: Able to identify the use of and versions used
 - The System integrator: Able to match deliverables with assurance
 - The Foundry: Able to track back to the source for issues and payments
 - The standards benefit all of these groups & the EDA tool vendors



IP Quality

QIP Metric & Ongoing Work



- The QIP open release (V.3) includes Vendor Qualification, Soft Digital IP, and Hard IP

The work going forward in VSIA on QIP is three fold:

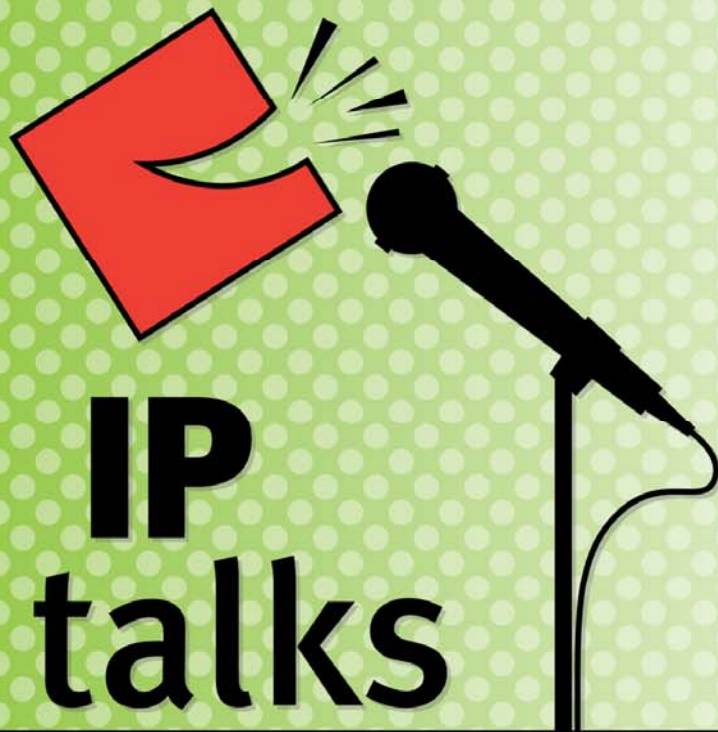
- Additional areas of QIP Metric coverage:
 - Verification IP (currently in beta)
 - Software IP (call for participation 2Q 2007)
 - Libraries
- Increased depth of deliverables
 - Define “handoff” points (sequence BoMs)
 - Prepare Deliverables checklists/Electronic Data Books
 - Additions required and optional Bills of Material in conjunction with SPIRIT and the Packaging Pillar of VSIA
- Adoption
 - Chip Estimate- using QIP rated IP as a searchable field in the IP portal
 - Hong Kong – SIP Platform/Ecosystem for safer SIP “transactions”
 - CSIG (China SIG for VSIA) licensed right to translate legacy VSIA Standards as foundation for China’s “recommended” standards; and is adopting the QIP
 - Tutorials, papers, conferences, and press



VSI IP Protection - Encryption



- IP Encryption Workgroup
 - Formed in October 2006 with the donation of Synplicity's Open IP Encryption Methodology
- Companies participating in the workgroup include:
 - Synplicity, Mentor Graphics, Cadence, Synopsys, Altera, CAST, LSI, among others
- Encryption Standard Goals:
 - Invisible to end user
 - Minimal runtime penalties
- Rights Management:
 - IP Vendor controls tool output:
 - External - IP is omitted from output.
 - Obfuscated - IP is present, unencrypted, but obfuscated.
 - Plain - IP is present in clear plain text



Technical Works Summary



- Enhancing QIP work
 - Scope
 - Depth
 - Adoption
- IP Value Protection
 - Tagging
 - Interoperable Encryption standards
 - Working within IEEE 1076 and 1801, and beyond!
- VSIA Transport Schemas
 - Provide for BoM structure and tool automation
 - Provide for Deliverables checking

VSIA is a vital and valuable organization with active current and increasing future activities



Enabling efficient markets for efficient IP reuse

ChipEstimateTM

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Thank you!

- Please stay and talk with Gary
- Explore QIP rated IP at ChipEstimate.com

