The Revenue Assurance Survey:

3 Day Hammerhead Program
RA for Voice Telecommunications

Assure any Voice Revenue Stream

Globally recognized certification in the end to end management of voice telecom revenue streams.

Voice Revenue Assurance Overview

RAS 101:
Network Foundations Access, Service Delivery and AAA – Focuses on the underlying infrastructure that makes any telecommunications system work. How telecom services are delivered, how delivery is organized, and how billing can occur with integrity.

RAS 102:
Billing Foundations Assurance of Billing System/Billing Model – Learn different billing systems (Traditional Postpaid, Classical Prepaid, Radius, Diameter, Specialized, and Convergent Billing Systems). Learn how to perform a complete mapping of the revenue stream.

RAS 103:
Partner Foundations Partner Business Models/Risks – Assurance of partner-based business models [Interconnect (CABS), roaming, content, VNO, and Outsourcing] and risk to the operational model. Learn the standard GRAPA approach to these models.

GRAPA

RA Academy

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Revenue Assurance Survey Hammerhead

RA for Voice Telecommunications

Overview: The three day Revenue Assurance Survey Course for GSM/CDMA and Wireline Voice is designed to provide the student with a comprehensive introduction to the professional practice of revenue assurance as defined by the GRAPA standards. It overviews the mapping of controls to the key, end-to-end revenue streams typical to GSM/CDMA and Wireline Voice Telecoms.

This course is an intensive overview of the process of assuring typical voice revenues [wireless (GSM/CDMA) and wireline]. We will review of each of the major areas of voice telecommunications revenue generation, and the assurance of those revenues. This program provides an operational review of controls and controls mapping, along with the practical exposure to the way that telecoms revenues and generated and best practices for how they are assured.

Who Should Attend? The primary audience for this training are revenue assurance professionals and others involved in related activities including internal audit, I/T, operational managers and finance and accounting personnel. This course is a must for:

- Professionals new to telecoms and the modern practice of revenue assurance
- Auditors and finance professionals interested in learning more about how the RA function is organized and practiced
- RA managers and experienced professionals interested in verifying their approaches and skills and looking for new approaches to how best to teach these methods to their staff
- Those looking for a more systematic, measurable, reliable and repeatable method for the performance of revenue assurance
- Individuals who want to understand how to organize the revenue assurance function
- Professionals interested in learning the industry best practice in how to assess (or develop requirements for) revenue assurance software solutions

Certification: Students who successfully complete this course and passes the exams will attain three credits of the five credits required to attain the Certified Practitioner of Revenue Assurance. Certification. This course, when taken in conjunction with a Practicum or Methods course will earn the full five credits needed for Practitioner Certification.

Session	RAS101 - Network Foundations	RAS102 - Billing Foundations	RAS103 - Partner Foundations
Opening Session	Intro to Network	Intro to Billing systems	Intro to Partner Assurance
Morning Session	The Domain Analysis Methodology (DAM©)	Postpaid Billing Systems (mediation, interconnect, roaming)	Interconnect (Protocols, Boundaries, DAM)
Late Morning Session	Circuit Principles (Wireline, GSM, CDMA)	Prepaid Billing Systems	SIMBOX, Bypass, and Related Risks
Afternoon Opening	Data Principles (ISP, WIMAX, GPRS, DSL)	Diameter, radius, and packet billing systems	Roaming (Protocols, Boundaries, DAM)
Afternoon Session	Broadcast Principles (Satellite, Cable)	Credit, provisioning, and channels	Content (Protocols, Boundaries, DAM)
Late Afternoon Session	Femtocells, Microwave, Leased-lines	Convergent billing systems	Regulator's Dilemma and Fraud Protection
Closing Session	Assure any Network	M-banking and location-based billing	VNO and Outsourcing Risks

RAS101: Network Foundations:
Access, Service Delivery, Provisioning and Triple "A"

Network Foundations focuses on the underlying infrastructure that makes any telecommunications service delivery environment function. All material covered on this day focuses on how telecommunications services are delivered to customers, and how that delivered is organized in order to guarantee that it is secured and that billing can happen with integrity. We begin with a review of the fundamental building blocks of all communications services - the Operational Environment and Teams themselves, and the different media that are utilized to deliver services.

Building upon this foundation, we will then introduce the concepts of Access Architecture and Servcie Delivery Architecture. Based upon this foundational knowledge we will then introduce the concepts and AAA (Authentication, Authorization and Accounting) - which forms the basis for all revenue management integrity.

Next we will then provide a step by step review of the Circuit based architecture. We will review how voice systems work, how they are secured (AAA) and how they are provisioned to make this possible. We will then shift to a parallel review of the same for Packet. We will review the history of Packet, Data and IP delivery, including the internet and the role of the ISP, and then see what the AAA and Billing architecture issues are for this environment, especially for VOIP.

Key Concepts:

- OSS Operations and Organization
- Fundamentals of wireless and wireline media
- Access architecture organization
- Service delivery architecture components
- AAA for Access and Service Delivery

- Circuit Technology Delivery
- SS7 - Principles, Components and Dialects
- Principles of CDR generation
- Principles of operation, organization and assurance for SMS and MMS
- Femtocell billing architecture, operations and assurance

Practical Applications:

- Learn the details of how Authentication, Authorization and Accounting are accomplished in the GSM, CDMA, DSL, WIMAX and other environments.

- Understand the network operations are organized, and how different media are harnessed to deliver services.

- Differentiate between the various methods of delivery and AAA for different environments and media

- Perfom BAA - Billing and Assurance Architecture.

- Utilize key control protocols for each environment and understand how these protocols define and deliver security and revenue.

GRAPA Certification Credit:

- OSS Operations & Organization
- Introduction to Telecommunications Media
- Access architecture components & organization
- SS7/SIP/WAP: Principles, Components & Dialects
- Packet Service Delivery
- Anatomy of a CDR
- Network Assurance (GRAPA standard controls)
- GPRS Billing Business Models & Architecture
- Fundamentals of Wireless Media
- Fundamentals of Wireline Media
- VOIP Principles & Applications
- Product Architectures (Cable, Wimax, Leased line, Burstable, Fiber, Microwave)
- AAA for Access & Service Delivery

RAS102: Billing Foundations
Assure any Billing System with Confidence

RAS102 is dedicated to the assurance of billing systems and billing models. We will review the different types of billing systems including Traditional Postpaid, Classical Prepaid, Radius, Diameter, Specialized and the new Generation of Convergent Billing Systems. Student will be familiarized with a complete spectrum of alternative billing models and scenarios. Coursework will include the entire accounting process associated with each of these systems including the alternative architecture models -- Postpaid:Postpaid / Postpaid:Prepaid / Prepaid:Postpaid / Prepaid:Prepaid.

During this day we will also map out complete revenue streams and sets of billing controls. We will consider the alternative methods utilized to assure each stream. Finally we will review the management of credit and fraud risk associated with these systems, and the determination and allocation of credit risk. Additional emphasis will be placed on the assurance of sales channels, external and internal channels and revenue controls regarding the sales force.

Overall, this day is focused on the operational details of post and prepaid systems. The major technologies covered will include the traditional BSS Based billing systems -- typical in Wireline and Postpaid GSM/CDMA -- as well as the network centric billing systems (Prepaid Voucher based systems) and IP based systems (Radius/Diameter) and the new generation of convergent systems. Attention will also be paid to manual, in-house developed and specialized billing and accounting methods.

Key Concepts:
- Mediation Systems architecture, operations and assurance
- Channel architecture, operations and assurance
- Sales tracking commissions and controls
- Provisioning, credit management and Collections operations, controls and assurance.
- Postpaid Billing Systems architecture, operations and assurance
- Prepaid billing business models and billing architecture, operations and assurance.
- Convergent billing systems - alternative architectures and their assurance
- Mpayment Principles and Assurance
- Radius and Diameter Billing Assurance and Controls
- Mpayment fraud exploits, methods, detection and deterrence
- Location Based billing business models and billing architecture, operations and assurance

Practical Applications:
- Understand the methods of revenue capture, processing and billing, collections and revenue recognition for major billing architectures.
- Learn the standard controls for each type of billing system, and the industry standard methods employed to assure and secure them.
- Utilize a cost effective, risk containment strategy for different billing environments in addition to a standard-practice approach to the forensics, corrections and controls for each.
- Perform the standard billing methods for all lines of telecommunications business, and efficiently troubleshoot problems and initiate proper investigations, corrections and controls.

Certification Credit:
- Mediation Operations (Functions, Forensics, Controls)
- Postpaid Billing (Functions, Forensics, Controls)
- Prepaid Billing (Functions, Forensics, Controls)
- Principles of IP billing (radius, diameter)
- Principles of Streaming billing (cable,video, audio)
- Principles of Convergent billing systems
- Principles of M-banking operations
- Principles of credit risk collection and Domain Analysis
- Principles of provisioning and activation assurance
- Principles of channel, agent, and commission assurance

RAS103: Partner Foundations
Partner Protection Principles

This day is dedicated to the understanding and assurance of partner based business models and the special assurance issues and revenue risks associated with them. The assurance of partner based business models like interconnect (CABS), roaming, content, VNO and Outsourcing add a significant number of risks to the operational model. During this 8 hour sessions, students will review and learn about the standard approach to manage risks in these models. This day will be focused on traditional Wireline, Wireless, Internet and other forms of Inter-carrier connection, Inter-carrier Roaming, Content delivery and VNO/Outsourcing.

Coursework will include an in-depth review of the entire revenue management domain for each of the following:

- Voice Interconnect (International and Domestic)
- Internet Interconnect (International and Domestic),
- VOIP Partnering, Voice Roaming (International and Domestic)
- Data Roaming (Wifi, WIMAX and HMA)
- Content delivery
- Broadcast / Streaming Delivery
- Virtual Network Operation Partners

Key Concepts:
- Partner Domain Controls
- Interconnect Business Models
- Interconnect billing architecture, operations and assurance
- Interconnect technical environment
- Regulators Dilemna for Interconnect
- Denial of Revenue in Interconnect
- Internet Interconnect
- SIMBOX fraud containment strategies

- Postpaid Roaming business models and billing architecture, operations and assurance
- USSD Roaming
- Prepaid roaming and camel billing architectures, operations and assurance.
- Data and Wifi Roaming
- WIMAX/CDMA Data Roaming
- VNO billing business models and billing architecture, operations and assurance

Practical Applications:

- Identify and apply the GRAPA standard controls for each of these partner-related domains as well as industry standard practice for all of them.

- Develop a complete understanding of how to analyze, assure and apply the GRAPA standard controls to the Interconnect, Roaming, VNO and Outsourcing Domains.

- Learn about Partner portals and the special assurance, AAA issues and controls required to deal with them.

- Create and apply rate, settlement process, and the negotiation process controls

- Build and implement partitioned revenue maps, boundary controls, deep controls

Certification Credit:
- Domain Analysis Methodology©: Interconnect
     InBound, Outbound, Transit, International, Domestic, CABS
- Domain Analysis Methodology©: Roaming
     DCH Controls, IREG/TADIG
     Postpaid Roaming, USSD Roaming, CAMEL
     WIFI Roaming, GPRS Roaming
- Domain Analysis Methodology©: Content
     Broadcast, Streaming and IP Media
     Settlement Controls for Content
     SMS, MMS, WAP, Streaming Content
     Business and Control Models
- Domain Analysis Methodology©: VNO & Outsourcing
     VNO/Outsource Revenue Mapping Discipline
     Boundary Analysis and Controls Design
     Deep Analysis and Controls Design

MORE THAN JUST TRAINING

THE REVENUE ASSURANCE ACADEMY
EXPERIENCE!

In the Classroom and out you will be getting benefits from Challenging Content, Socializing, Discussion, Participation, Confidence Building and Networking.

RA Academy

Why We are the Leaders in Training Telco Professionals Around the Globe

Join the leading Revenue Assurance focused training events. Featuring exclusive presentations, real-world examples of procedures, solutions, and strategies that have effectively reduced leakage and maximized profits for telcos around the world.

✔ Masters Certification – GRAPA's highest and most prestigious certification that is attained after completing a rigorous and exhaustive training program whose extensive curriculum spans the broad and complex landscape of revenue assurance

✔ Proactive Methods – GRAPA training teaches your team how to get moving and anticipate risks and losses BEFORE they become a leakage event.

✔ Scientific Approach -- GRAPA methods and standards provide the RA team, management and operational managers with the most thing they need MOST from a revenue assurance department. A systematic, reliable, consistent approach which delivers results EVERY TIME.

✔ Tailored Content – Training is adjusted to align the needs of the students to the available material. Students are asked to fill out "GRAPA Benchmark Surveys" to determine the level and nature of the training required. The survey results help us determine how well you know your own systems, and provide clues about what you need help with. The principles and practices taught are also applied to cable, satellite, wireless voice, SMS, MMS, IPTV, and MMDS with equal conviction, detail, and effectiveness.

✔ Based on Real-World Situations – The majority of the training is experience-based "standard practices" in revenue assurance, harvested from the many revenue assurance professionals who participate in "practices surveys," "strategy sessions," and other information-sharing events. Clear, specific deliverables are provided that apply to real-world situations. The material is never based on speculation, guesses, or unvalidated information.

✔ Interactive – The workshops are more than lecture sessions. RAA classes are participative and interactive and students are expected to proactively join in discussions, problem solve, and fill out benchmarks. Attendees have opportunity for much interaction with the instructor and other students. Lunch and breaks are devised to facilitate more intimate conversation.

✔ Professional Development – Students master vocabulary needed for creating a sense of professional identity and opportunities with other like-minded people in the industry that share common goals and issues.

GRAPA training is proven to help YOU put your Revenue Assurance department at the leading edge of the new technologies, business models and revenue streams that are defining the future of telecommunications.

Rob Mattison, world renowned expert in telecommunications and the revenue assurance industry, teaches all courses.

Rob has 20+ years of hands-on industry experience. He is the president of GRAPA, author of *The Revenue Assurance Standards - 2009 Edition*, and of *The Telco Revenue Assurance Handbook*, which has become the authoritative guide for RA Managers at telecom firms around the world.

Louis Khor, known for his energetic, lively and enthusiastic presentations on Revenue Assurance and Fraud at industry events and conferences, brings that same motivational style to teaching what he loves most – helping telecoms revenue professionals understand how uniquely positioned they are to affect the ongoing success and profitability of their organizations.

Pamela Noriega has been GRAPA's Regional Chairperson for Latin America since 2008. Her background includes extensive experience in Finance, Risk Analysis and Project Management in several industries including Banking and Telecommunications. She will lead faculty for the South American region and provide RA Academy training in both English and Spanish.

CONTACT US

For the most up-to-date list of upcoming events please visit our website:

www.ra-academy.org/revenue_assurance_train-ing/upcoming_events.html

2012 SCHEDULE:

06-10 Feb	London, UK
27 Feb - 02 Mar	Singapore
12-16 Mar	Lagos, Nigeria
18-22 Mar	Dubai, UAE
07-11 May	Cape Town, South Africa
21-25 May	Chicago, USA
17-21 June	Dubai, UAE
22-26 Oct	Cape Town, South Africa
11-15 Nov	Dubai, UAE
03-07 Dec	Orlando, USA

We schedule courses and venues based on demand, so please be sure to tell us if you are interested in a particular class and location. We only move forward with our planning if there is enough interest. To make these trainings happen we need commitment from a minimum number of delegates. Please refer to our website for specific policies.

TELCO EXECUTIVES RAVE ABOUT THE COURSES...

The Revenue Assurance core curriculum course has been one of the best courses I have ever attended. The ability of the trainer to present highly technical and complex subjects to practical and easy to use concepts was just amazing. I will definitely apply what I have learned in the course in my work.

Revenue Assurance Manager, The Netherlands

Rob really knows his stuff and is very passionate about it. If you really want to get a wider perspective of what revenue assurance is really about, then he's the man to go to! The course is intense and extensive but nonetheless highly enjoyable. I would highly recommend the course equally to those with both a technical or non technical interest in the subject.

Manager, Dubai

ABOUT US:

The Revenue Assurance Academy (RAA) is the exclusive training organization of GRAPA. GRAPA has over 6000 registered members and has distributed more than 3500 copies of its 2009 standards book. The Revenue Assurance Foundations (RAF) core curriculum is the Academy's latest curriculum offering, providing revolutionary, relevant material. By offering events that combine benchmark development, sharing of standard practices and approaches, as well as delivery of workshops, the Revenue Assurance Academy provides a unique and powerful venue for deployment of standard practices and rapid integration of those practices into the participating telco environments.

We have conducted our training programs for dozens of carriers and services providers around the world. Our workshops are offered in public venues (attended by delegates from many operators and services providers, which promotes the sharing of practices) as well as onsite for a private, more personalized and focused training for a company's staff.

SOME OF WHAT MAKES OUR TRAINING SO UNIQUE:

1. Based entirely on the GRAPA standards of professional revenue assurance practices
2. Taught by Rob Mattison, the world's leading authority on the practice of revenue assurance in telecommunications, winner of many awards for his work in this area, author of The Revenue Assurance Standards--2009, The Revenue Assurance Handbook, and dozens of whitepapers.
3. Focused heavily on practical experience, not theory

Visit our website to read some great reviews from students who have attended our training: www.ra-academy.org/RAA_info/testimonials.html