

Telecoms & Tech Academy

SCHOOL OF ADVANCED
COMMUNICATIONS
TECHNOLOGIES

COURSE DESCRIPTION

NEXT GENERATION AND CONVERGED BILLING

Format:
Classroom (Live on
Web Available)

Duration:
2 Days

**KNect365
Learning**
an **informa** business

COURSE SUMMARY

HIGHLIGHTS

- **Highly focused and in-depth training from the experts - including relevant updates from Ovum's extensive research team**
- **Trainers and programme directors that are experts, industry experienced, and highly accomplished training professionals**
- **Training outcomes and competency development designed to meet industry and organisational requirements**



“The programme was well structured and the instructional method was excellent.

DS

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COURSE SUMMARY

A next generation billing system is an essential enabler for forward-looking telecoms operators. The business opportunities presented by digital services, convergence, content and partnerships mean operators are transforming their core network environments to support much more flexible and capable service provision.

Billing architectures, platforms and processes are at the heart of this transformation - but a complete understanding of how billing supports the wider service environment, is needed to ensure investment is maximised, and the developing business models are supported as effectively as possible.

This programme explores next generation billing systems in some detail, including on-line and off-line systems; billing architectures; processes; revenue flows; the home and roaming scenarios (for mobile); post-paid and pre-paid; billing in the IMS and 4G/IP-based networks for Voice over IP (VoIP); and billing KPIs.

We also cover how billing is part of the wider service delivery environment that includes Policy Control, Quality of Service mechanisms, Convergence, Carrier Billing, Revenue Assurance and its potential use with Big Data solutions. Billing as part of the wider BSS (Business Support System) environment and the TM Forum eTOM and Framework initiatives is explored, as well as a ITIL and ITAAS.

The programme is designed to allow participants to fully assess the requirements and steps required to efficiently transition to next generation billing within their own organisation; to fill in the gaps for a more holistic view of future billing systems; or to better understand the evolving systems that support digital services, convergence, content and partnerships.

OUTCOMES & COMPETENCY DEVELOPMENT

Participants will develop or be able to:

- Evaluate implementation options for next generation billing systems
- A deep understanding of billing architectures, processes and systems - as well as the KPIs used to evaluate performance
- Advise on the deployment of advanced billing systems as part of the evolving core network and service delivery environments
- Contribute much more effectively to planning activities centred on billing systems and the integration of billing into the wider set of core network support technologies
- Develop solutions in a much more holistic manner - ensuring deployment options take account of associated system integration with IP infrastructure, PCC, IMS, and QoS mechanisms - for both voice services, including Voice over IP (VoIP), and Data
- A solid understanding of the different billing system requirements and scenarios - including on-line and off-line systems; single and converged architectures; pre and post paid support; home network and roaming scenarios; and partnerships
- Make decisions on implementation and procurement that are commercially viable, minimise risk, and in line with the strategy and goals of the wider organization.

COURSE CONTENTS

INTRODUCTION TO BILLING SYSTEMS

This module introduces the concept and terminology of telecommunications billing. It highlights the basic requirements, the overall process, as well as billing as a key part of the overall operator business, and the wider network. IP-based systems are explored, as well as the requirements of next generation billing systems, focusing on the benefits any upgrade may bring to the overall business.

- Key requirements of the billing system
- Types of billing
- Billing data and the network
- Billing platforms & billing processes – overview
- Billing for IP and converged services
- Pre-paid and post-paid billing scenarios
- Controlling service access for pre-paid billing
- Roaming and the billing process
- Inter-operator revenue flows
- Introduction to ITAAS and ITIL

BILLING PROCESSES FOR MOBILE NETWORKS

Mobility and roaming mean billing processes and requirements within the mobile network are more complex than for fixed networks. In this module, we look at the requirements and processes needed to effectively control revenue flows as customers use their home network or roam abroad. Pre and post-paid scenarios are highlighted, before moving on to the roaming scenario.

- Billing process – the key steps
- Pre-paid and post-paid billing scenarios
- Controlling service access for pre-paid billing
- Roaming and the billing process
- Inter-operator revenue flows

BILLING TECHNOLOGIES

Effective and efficient billing systems and rely on a number of underlying platforms, technologies and supporting systems. In this module, we explain the requirements and explore how the technologies are used in modern billing system deployments.

- Billing systems – the overall requirement
- The different billing platforms
- Billing as part of a wider IT infrastructure
- On-line and off-line billing systems
- Policy Control and Charging overview
- Upgrading and evolving the billing system

INTRODUCTION TO CDRS

Central to the billing process is the collection of call / event details from the Exchange / MSC or other network elements. In this module, we take a look at the Call Detail Record – highlighting the details that are collected and sent to the billing system, the format, and how the information is used. The UDR (User Data Record) is also explored in order to gain an insight into the data available for next-generation billing systems.

- What is a CDR?
- What is the CDR used for?
- The CDR Format
- CDR data – the details
- UDR - explained

BUSINESS PROCESS FRAMEWORK (ETOM)

The TMForum has focused on both BSS and OSS (Business / Operational Support Systems) in an effort to introduce an element of standardisation and best practice. The Business Process Framework (eTOM) model is part of that effort, and is part of the wider Framework initiative. In this module, we explore how billing fits into the model.

- The Business Support System (BSS) defines
- Billing as part of the BSS
- The TMForum
- TMForum Framework
- Business Process Framework (eTOM) model
- Billing as part of the eTOM model

REVENUE FLOWS

The entire billing system is deployed to ensure the telecoms operator can assess and track payments in line with specific tariffs and customer contracts, and then to distribute the revenue to roaming networks, partners, or third parties as required. This module takes a look at revenue flows in the context of the wider business.

- The simple value chain model
- Multiple-party value chains
- Roaming
- Interconnect
- Third party service providers
- Collecting and exchanging data
- The role of the clearing house

COURSE CONTENTS

REVENUE ASSURANCE

Worldwide, operators are losing vast amounts of revenue from multiple sources – ranging from problems collecting billing information, to fraud. An effective Revenue Assurance System is a critical requirement to minimise any revenue leakage, and can have a huge positive knock-on effect to major business / finance KPIs (Key Performance Indicators).

- Revenue leakage – understanding the problem
- Sources of revenue leakage
- Defining revenue assurance
- The requirements for revenue assurance
- Revenue assurance platforms
- Revenue assurance in the wider business

BILLING ARCHITECTURE

Billing is generally split into several different functions and processes, with individual platforms supporting one or more processes, and with the overall system being deployed across multiple platforms. In this module, we look at the entire billing architecture, highlighting the functions of the different platforms and their contribution to the overall billing process. The platform types and their relationship to the operational network and to the customer are explored.

- Billing platforms – the overall requirements
- Bringing the billing components together
- Connecting the network to the billing platforms
- The high-level billing architecture
- Evolving the Architecture

MAKING THE TRANSITION TO NEXT GENERATION BILLING

Advanced billing features are needed by telecoms operators looking to offer new and innovative services and charging schemes. Making the transition to Next Generation Billing is therefore a critical business enabler to maximise future opportunities. This module explains how operators are making the transition, looking at the features required from the new deployments, and the steps required.

- Next generation services
- Billing requirements for current and next-generation services
- On-line billing systems – a key enabler
- Advantages of on-line billing systems
- On-line billing in the wider service environment
- Technology requirements
- Making the transition to next generation billing

CONVERGENT BILLING - BRINGING FIXED AND MOBILE TOGETHER

As technologies advance and telecom operators evolve their business models, and the regulatory environment is modified, convergence is emerging as a key element of the service mix. In order to provide fully converged services, a suitable billing system must be in place. This module explores the requirements for converged billing, the processes and gives an overview of practical billing convergence strategies.

- Converged services – a definition
- Business drivers for convergence
- Converged billing requirements
- Converged billing platforms and systems
- Practical billing convergence

BILLING AND THE IP MULTIMEDIA SUBSYSTEM

As network operators upgrade to LTE and the core network becomes much more IP-centric with the move towards the Evolved Packet Core (EPC), the IP Multimedia Subsystem (IMS) will become increasingly important in supporting a range of different services – including voice in LTE networks. This module explores the interrelationship between IMS and the billing system – setting out the key requirements as well as the architecture, technologies and processes involved.

- IMS as a system
- IMS as part of the core network environment
- The billing system requirements
- Policy Control and the Diameter protocol
- IMS billing interfaces
- IMS and the billing process

POLICY CONTROL

Policy Control and Charging (PCC) is a big part of next generation core networks, and in particular the Evolved Packet Core (EPC) that will be at the heart of LTE / 4G networks. This module focuses on PCC as an integral part of the network, highlighting its position as a key enabler of advanced service control. Functions of the different elements, as well as the various interfaces and technologies are explained, with examples used to illustrate.

- PCC as a concept
- PCC in the advanced core network and EPC
- PCC elements and interfaces
- Key PCC procedures
- Example scenarios

COURSE CONTENTS

ROAMING

Billing for roaming customers is a more complex proposition than for those in the home network. The collection and distribution of billing data, as well as the distribution of revenues through the value chain (interconnected networks) must be managed effectively. This module explains the major requirements as well as the way each requirement is fulfilled – for both pre-paid and post-paid customers, for voice and for data. The timely transfer of billing records is looked at in terms of the standards that in place, as is the role of the clearing house.

- Roaming scenarios
- Billing requirements of roaming
- Controlling service access for pre-paid customers whilst roaming
- Handling and transferring the billing data
- Distributing revenues through the value chain

KPIS FOR BILLING

Billing accuracy, promptness, and clarity, amongst a range of other Key Performance Indicators (KPIs), can be used to assess the effectiveness of the billing system. Designed as a short session to explore billing KPIs, this module highlights the need for such KPIs before stepping through the eight major objectives of billing, and the ten relevant KPIs cited by the Global Billing Association.

- The need for KPIs
- The major billing objectives
- Billing KPIs explained
- Mapping KPIs to the objectives

USING BILLING & OSS/ BSS SERVICE DATA

Industry experts often cite Subscriber and Service data as a valuable asset of the telecoms operator, but knowing how to collect, collate and use that data is the key to its value. This module explores the type of data that might be collected and why it might be useful, as well as the overall system requirements for collection and collation.

- What data could we collect?
- How could we use it?
- Why should we use it – what advantages will it bring?
- Mechanisms for collecting the data
- The underlying platform requirements

OUR TRAINING SERVICES

TELECOMS & TECH ACADEMY STRUCTURE

Our training programmes are delivered worldwide as part of the training and development plans of many operators, vendors, and service providers. The programmes cover a wide range of competency development requirements.

To ensure we meet the training needs of the industry as effectively as possible, we operate three schools:

School of Telecoms Management

Business training tailored to the telecoms industry, ranging from the intensive 5-day Telecoms Mini MBA to specialist leadership and marketing training.

School of Advanced Communication Technologies

Covering a multitude of technologies, these courses range from overviews aimed at nontechnical staff to in-depth engineering training.

Distance Learning

Our comprehensive suite of Distance Learning programmes provide an excellent opportunity to expand knowledge and build confidence.

OUR TRAINERS

We only use trainers and programme directors that satisfy the following three criteria:

- Experts in their field
- High level of Industry Experience
- Expert facilitators and training professionals.

All our trainers have undergone a rigorous selection process and are subject to continuous monitoring and evaluation. Each trainer is accredited for specific courses or topic areas. Whether engineers or business experts, all our trainers are required to continue their own development within their specialist areas, and to broaden their Industry view of trends, best practice and technology.

This is achieved by our on-going work with many tier 1 operators and vendors, and by full exposure to Ovum research and KNect 365 TMT worldwide events.

UNIVERSITY ACCREDITATION

Some of our programmes have been accredited by the University of Derby Corporate; a UK-based university highly acclaimed in the area of employer engagement. They are at the forefront of the drive to integrate highly focused industry-led training with the academic rigor and quality control of university-based education. Our comprehensive Advanced Telecoms Management Series have been accredited Post-Graduate Level, with our extensive suite of Distance Learning at Undergraduate Level)

We would be happy to discuss extending accreditation to tailored ATMS or programmes based on our Distance Learning modules. Although accreditation is specific to these programmes, the work we do with the University of Derby enable us to develop and apply best practice across our portfolio.

CUSTOMISED IN-HOUSE TRAINING

Telecoms & Tech Academy has worked with countless companies to deliver customised training programmes. We take time to understand your requirements, you'll work with our specialist training team to ensure that we deliver your perfect training programme for your business.

A customised training programme from Telecoms & Tech Academy ensures you get a course that precisely matches your organisation's needs, presented by a first-rate training organisation, with access to all the latest industry research and analysis.

WHY CHOOSE IN-HOUSE TRAINING FROM TELECOMS & TECH ACADEMY?

- Content can be customised to focus on the issues you want – work with us to develop the training course to match the exact needs.
- Unique industry research – from Ovum's team of industry leading analysts
- Expert trainers – our team of versatile trainers have the knowledge and experience to deliver a highly effective learning experience
- The most efficient way to train your staff – at the time and location to minimise disruption
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- Pre and post course assessment – can be included in programmes to measure competencies and check on the required progress.

Contact us to discuss how we can build your perfect programme.



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