# ISO/IEC TR 12860:2009-04 (E)

## Information technology - Telecommunications and information exchange between systems - Next Generation Corporate Networks (NGCN) - General

## Contents

Page


Foreword ..... v

Introduction ..... vi

1 Scope ..... 1

2 Normative references ..... 1

3 Terms and definitions ..... 2

4 Abbreviated terms ..... 4

5 Background ..... 5

6 General concepts ..... 6
6.1 Basic communication architecture ..... 6
6.2 Session level architecture ..... 8
6.2.1 Signalling using SIP ..... 8
6.2.2 Media path ..... 10
6.2.3 Example ..... 10
6.3 Domains ..... 10
6.4 Mobility ..... 11
6.4.1 Roaming of enterprise users outside their home domain ..... 12
6.4.2 Accommodating guest users on an NGCN ..... 13
6.5 The hosting concept ..... 13
6.5.1 Dedicated NGCN ..... 14
6.5.2 Enterprise hosted by a single public network infrastructure ..... 15
6.5.3 Enterprise hosted by multiple public network infrastructures ..... 15
6.5.4 Enterprise hosted by a combination of enterprise infrastructure and a public network infrastructure ..... 16
6.6 Private network traffic and public network traffic ..... 16
6.7 Other technical considerations ..... 17

7 Scenarios for session-based communications ..... 17
7.1 Session-based intra-domain communications ..... 18
7.2 Session-based inter-domain communications within a single enterprise network ..... 19
7.2.1 Communication between domains supported by the same infrastructure ..... 20
7.2.2 Communications between domains of an NGCN via a TSP ..... 21
7.2.3 Communications between domains of an NGCN using private network traffic through a hosting NGN ..... 21
7.2.4 Communications between domains of an NGCN using public network traffic through a public SSP such as an NGN ..... 22
7.2.5 Communications between a dedicated NGCN domain and a domain hosted by an NGN ..... 22
7.2.6 Communications between a dedicated NGCN domain and a domain hosted by an NGN as private network traffic via an intermediate NGN domain ..... 22
7.3 Session-based communication between two enterprises ..... 23
7.3.1 Extension of enterprise network to include partner networks ..... 23
7.3.2 Direct peering ..... 23
7.3.3 Indirect peering ..... 24
7.3.4 Third party assistance ..... 25

7.3.5 Direct peering between two enterprises hosted by the same hosting enterprise infrastructure ..... 26
7.4 Session-based communication with users of public networks ..... 26
7.4.1 Communication between an NGCN user and an NGN public network user ..... 26
7.4.2 Communication between an NGCN user and an NGN public network user with break-in or break-out function in the NGN ..... 27
7.4.3 Communication between an NGCN user and a public network user of a remote NGN ..... 28
7.4.4 Communication between an NGCN user and a public network user of a remote NGN with break-in or break-out function in the local NGN ..... 28
7.4.5 Communication between an NGCN user and a public network user of a remote NGN with break-in or break-out function in the remote NGN ..... 28
7.4.6 Communication between an NGCN user and a PSTN/ISDN user via an NGN ..... 29
7.4.7 Communication between an enterprise user hosted by a public network infrastructure and a public network user of that same infrastructure ..... 30
7.5 Session-based roaming ..... 30
7.5.1 An NGCN user at a visited sub-domain of the NGCN ..... 30
7.5.2 An NGCN user at a visited sub-domain of the NGCN using private network traffic through an NGN ..... 31
7.5.3 An NGCN user at a visited NGN ..... 31
7.5.4 An NGCN user at a visited NGN using indirect roaming ..... 31
7.5.5 An NGN-hosted enterprise user at a visited NGN ..... 32
7.5.6 An NGN-hosted enterprise user at a visited NGCN ..... 32

8 NGN considerations ..... 32
8.1 Summary of scenarios involving NGN ..... 32
8.1.1 Scenarios involving NGN as a TSP ..... 32
8.1.2 Scenarios involving NGN as a SSP ..... 33
8.1.3 Roaming scenarios involving NGN as a SSP ..... 33
8.2 Interfacing NGCN to NGN ..... 33
8.2.1 Subscription-based business trunking ..... 33
8.2.2 Peering-based business trunking ..... 34
8.2.3 Roaming ..... 34

9 Application considerations ..... 34

10 Current standards and standardisation efforts ..... 36
10.1 IETF Real-time Applications and Infrastructure (RAI) area ..... 36
10.2 SIP Forum ..... 36
10.3 ETSI TISPAN ..... 36
10.4 3GPP ..... 37
10.5 ITU-T Study Group 13 ..... 37