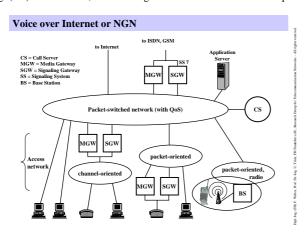
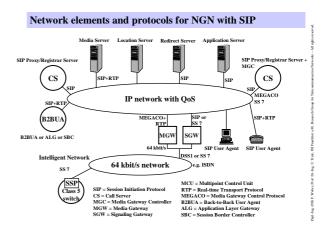
VoIP – SIP-based via Internet or NGN

 6^{th} Wuerzburg Workshop on IP: Vision of Future Generation Networks

Dipl.-Ing. (FH) Frank Weber, Prof. Dr.-Ing. Ulrich Trick - Research Group for Telecommunication Networks. FH Frankfurt/M. - University of Applied Sciences

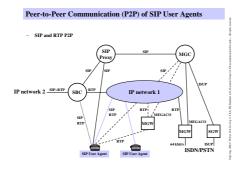


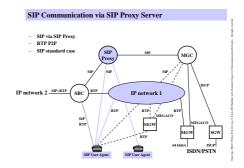


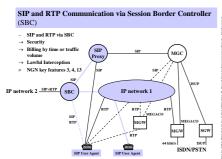
Key features of Next Generation Networks (NGN)

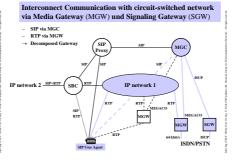
Packet oriented (core) network for all services	Overall unified network management			
2. Quality of Service (QoS)	10. Mobility			
Utilizability for new services	11. Integrated security functions			
Separation of call/service control and user data transport	12. Service-appropriate billing			
5. Integration of any existing, important telecommunication network, especially access networks	13. Scalability			
6. Application Server (AS)	14. Unrestricted access by users to different networks and service providers			
7. Multimedia services	15. Consideration of applicable regulatory requirements			
8. High bit rate				

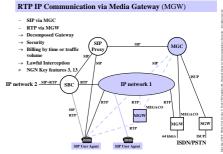
Use of SIP network elements in NGN











UMTS Rel. 5 – IP Multimedia Subsystem (IMS)

CWID Ref. 5 – II Wintermedia Bubsystem (IWB)					
Session Management and Routing		Interworking			
P-CSCF (Proxy-CSCF) → ~ SIP Proxy Server	. '	BGCF (Breakout Gateway Control Function) → ~ SIP Proxy Server			
I-CSCF (Interrogating-CSCF) incl. THIG (Topology Hiding Inter-network Gateway) → ~ SBC for	1 [MGCF (Media Gateway Control Function) → ~ MGC			
signaling only	. '	IM-MGW (IP Multimedia-Media Gateway) → ~ MGW			
S-CSCF (Serving-CSCF) → ~ SIP Registrar/Proxy Server	. '	SGW (Signaling Gateway) → ~ SGW			
Services		Data base			
AS (Application Server) → ~ SIP Application Server	. '	HSS (Home Subscriber Server) → ~ Location Server			
MRF (Multimedia Resource Function) → ~ Media Server					

