

# **Integrating next generation multimedia services to existing telephones**

**APRICOT 2004  
Tim Youm  
Nortel Networks**

# Introduction

- **In today's voice network, there are still many traditional voice system which are not capable of delivering multimedia services. At the same time, there are constantly new multimedia features are being developed through different platforms/technology hence this session is focusing on how these new type of multimedia services (Video, presence, IM, app sharing, conferencing etc) can be fully integrated into existing telephones ensuring that end user can maintain existing telephone number/address and have additional multimedia capabilities.**

-

# Problems: Too many numbers/addresses for communication devices



## Goal: Single user name/ Single Phone no



Integrating next generation multimedia services to existing telephones

# Converged Desktop Solution: *Multimedia Services - Taking existing Telephone Services to a New Level!*

## Telephony Device



*Extensive Voice Services  
Reliability*

## Multimedia Device



- Video
- IM/Presence
- Collaboration
- Mobility

*Multimedia Capability  
Flexibility  
Mobility*

**PLUS**

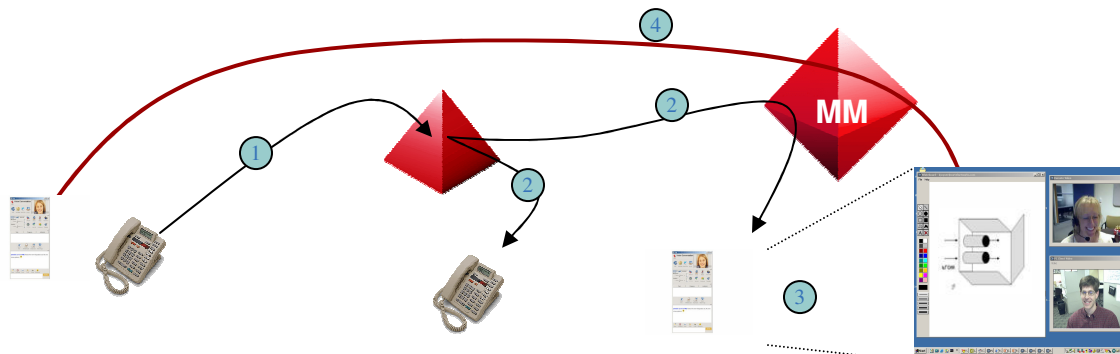
**Complementary services using familiar user interfaces**

Integrating next generation multimedia services to existing telephones

# Benefits of Converged Desktop Solution

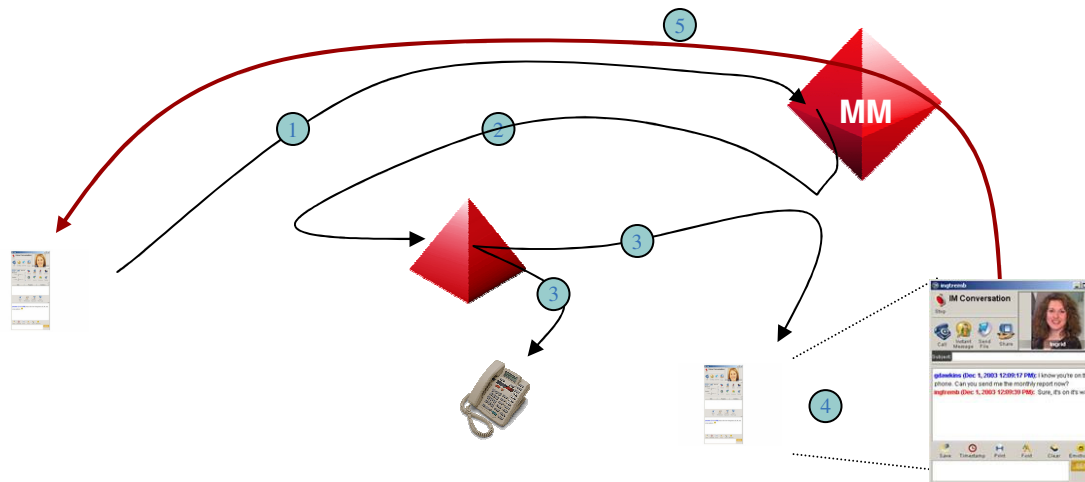
- **End users can keep using their existing telephone**
- **No fear of lost services (if its not broke, don't fix it!)**
- **Less stringent enterprise data network requirements (don't have to make the data network QoS enabled for Converged Desktop)**
- **Allows TDM Centrex or key system operators to offer new, multimedia services**
- **Allows for existing enterprises to multi-media enable their end users**

# Converged Desktop Solution Goal



## Call from CDS User

1. Call from Blended User
2. Alert Phone and (voiceless) MM Client
3. MM Client screen pop, with 10 sec delay
4. Collab / IM / etc. call-back established to user



## Call to CDS User

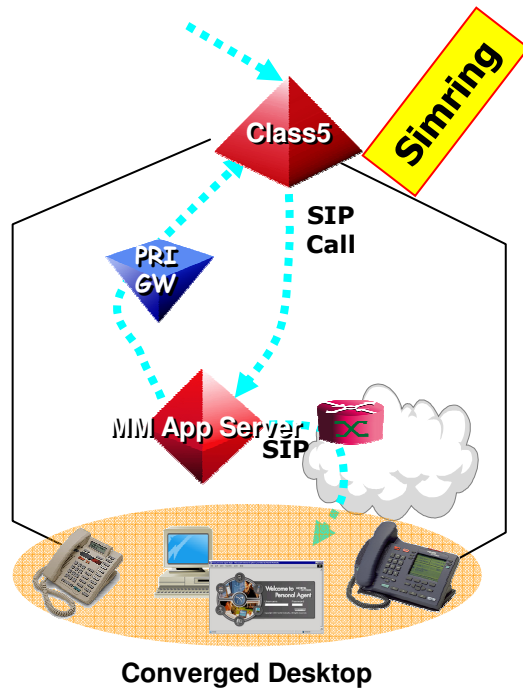
1. Call from Regular MM Client User
2. MM App Server determines that terminator is Voiceless Blender – sends call to PSTN
3. Alert Phone and (voiceless) MM Client
4. MM Client screen pop, with 10 sec delay
5. Collab / IM / etc. call-back established to user

Integrating next generation multimedia services to existing telephones

# Converged Desktop Solution

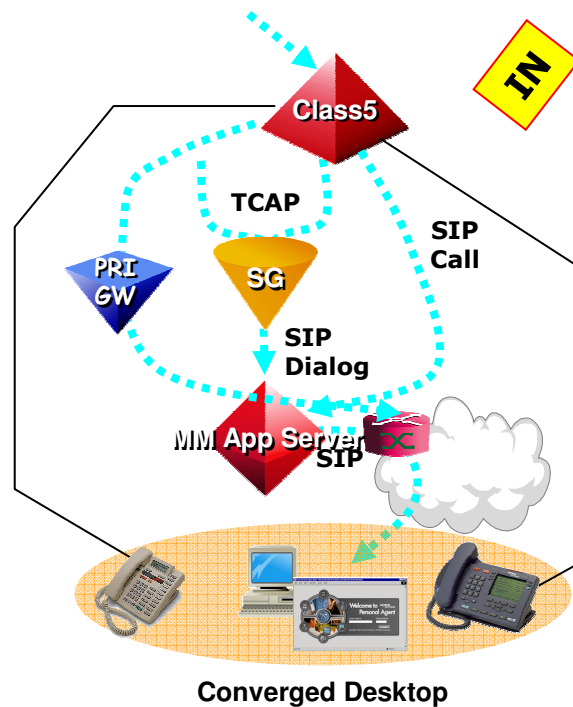
## SIMRING

- MM App server Receives a CD Call through a Trunk
- End Office SimRings MCP Number & TDM Line



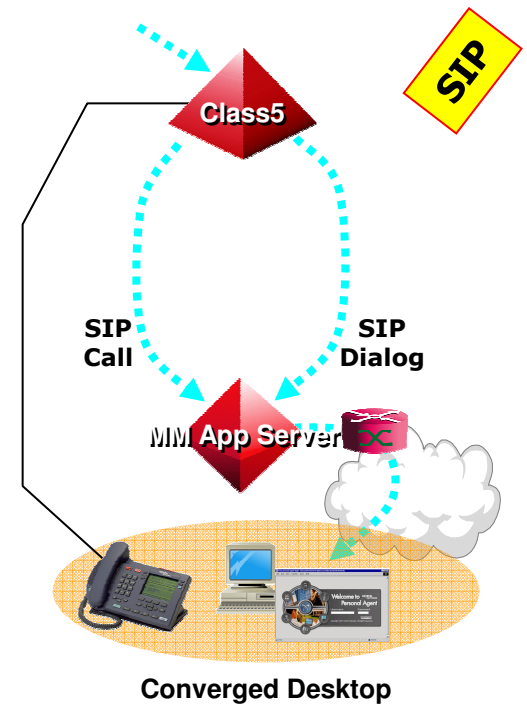
## IN / SIP Convergence

- End Office uses IN Trigger as a stimulus, messages MM App Server (via SG), MM App Server uses Personal Agent Routing for call's multi-media enhancement and directs the End Office to ring TDM Line



## SIP Dialog

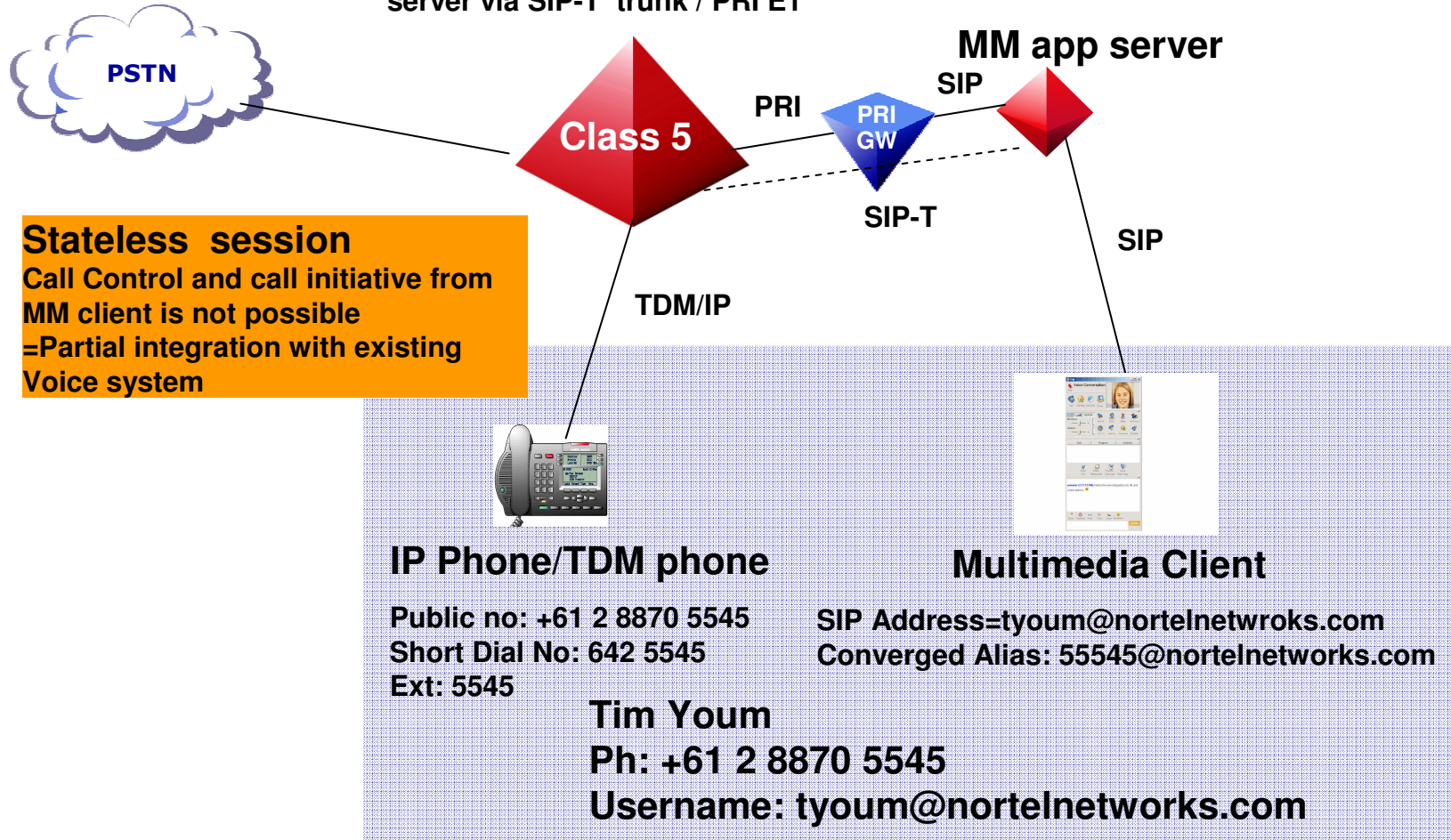
- SIP Convergence with Class 5 SS
- Optimized for Pure SIP Environment
- No IN-triggers



Integrating next generation multimedia services to existing telephones

# 1: Converged Desktop Solution: SimRing

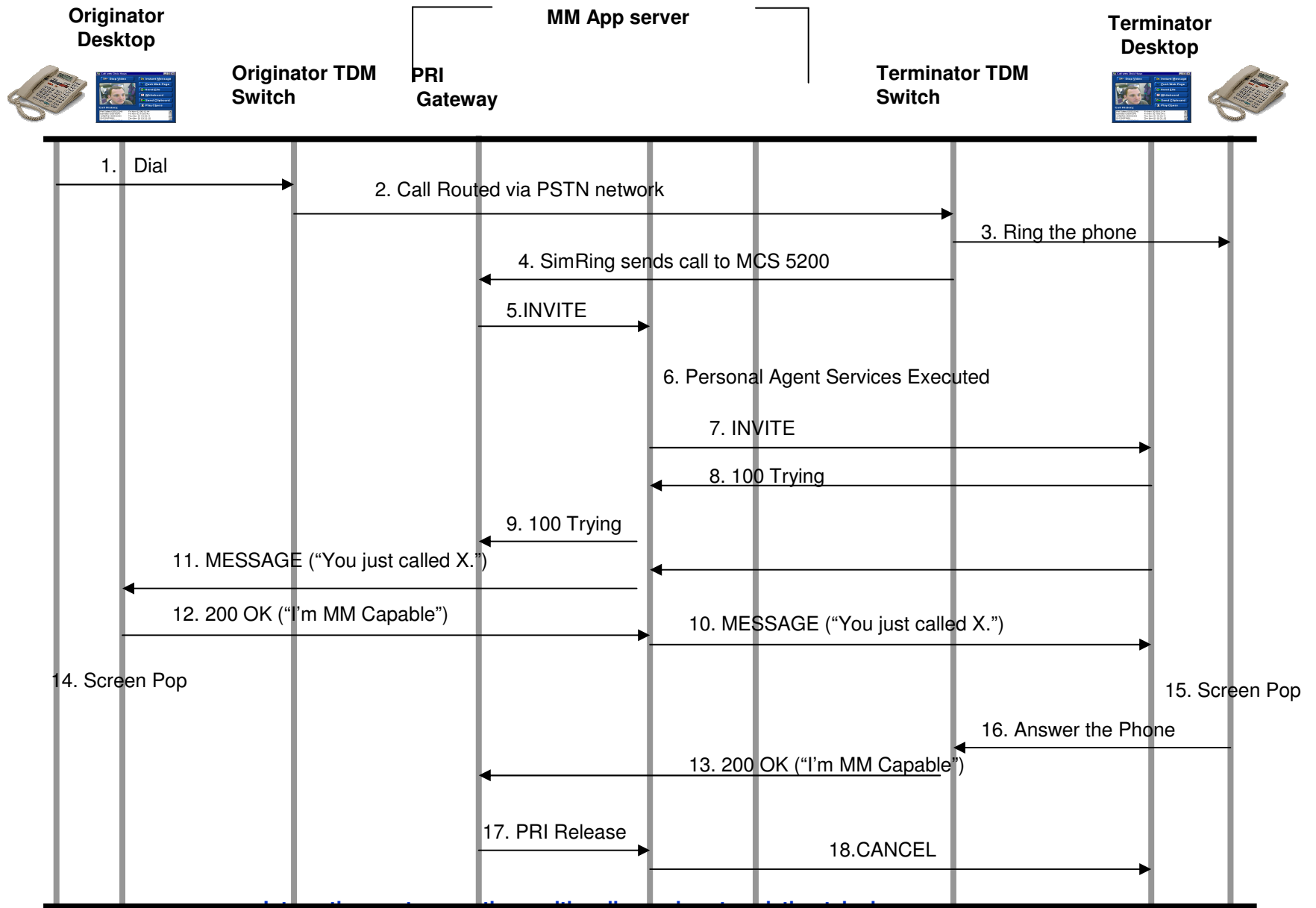
DN=02 8870 5545, 642 5545, 5545  
Has Simultaneous Ring feature to call  
to virtual no "5545" to MM app  
server via SIP-T trunk / PRI E1



Integrating next generation multimedia services to existing telephones



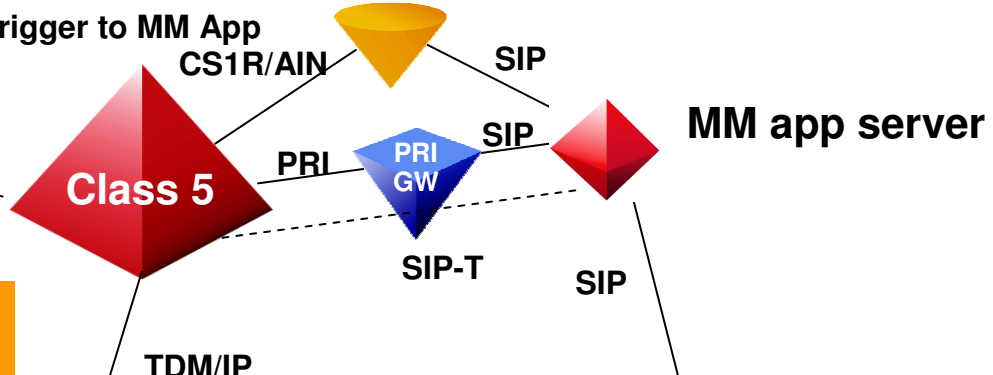
# Call Flow: call from CD to CD (SimRing)



Integrating next generation multimedia services to existing telephones

## 2: Converged Desktop Solution: IN

DN=02 8870 5545, 642 5545, 5545  
 Has Simultaneous Ring feature to call to virtual no "5545" to MM app server via SIP-T trunk / PRI E1 as well as initiate IN trigger to MM App server via SG



**State full session**  
 But require SG to convert from CS1R/AIN to SIP  
 = Full MM integration with existing voice system

### IP Phone/TDM phone

Public no: +61 2 8870 5545  
 Short Dial No: 642 5545  
 Ext: 5545

### Multimedia Client

SIP Address=tyoum@nortelnetwroks.com  
 Converged Alias: 55545@nortelnetworks.com

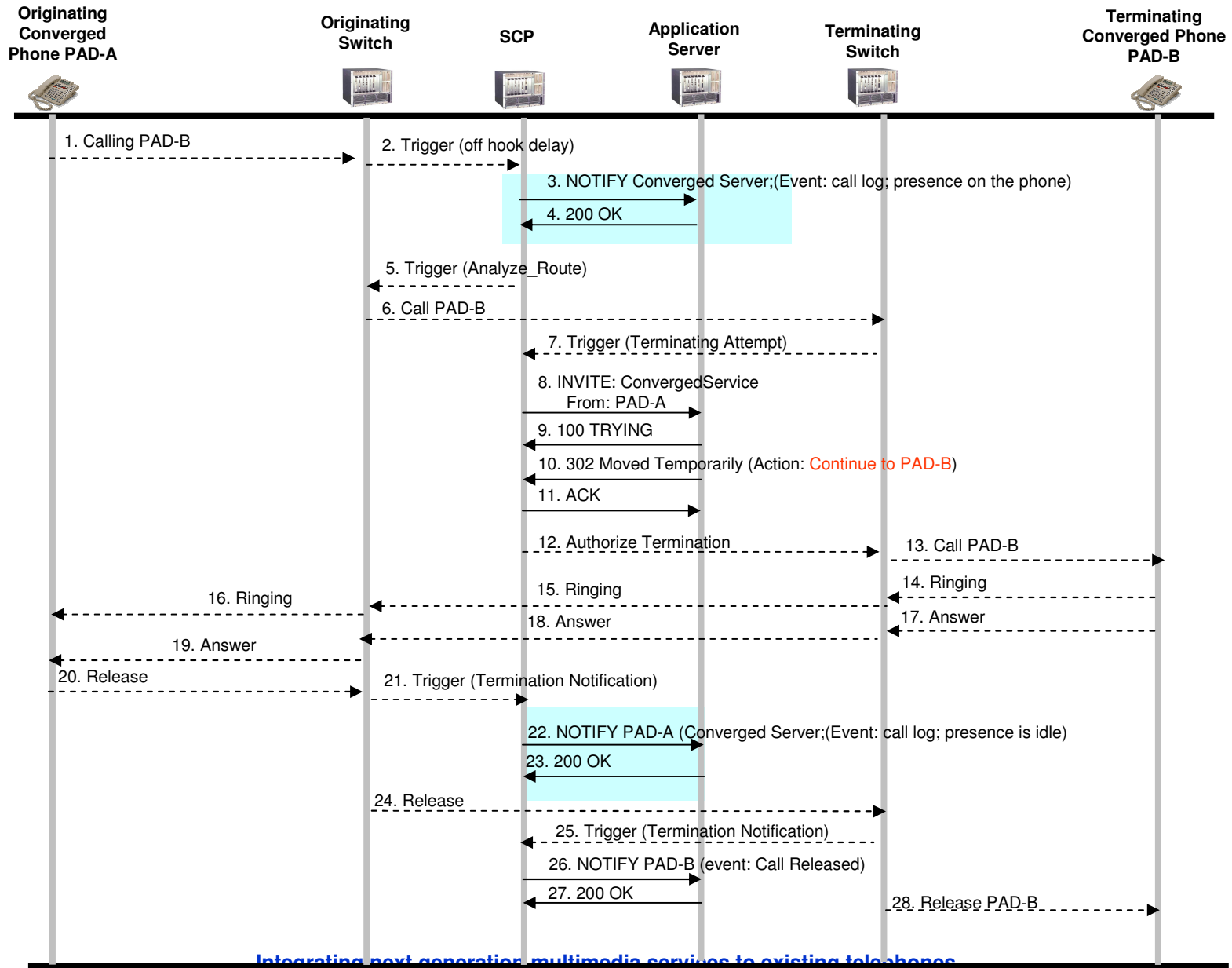
**Tim Youm**

**Ph: +61 2 8870 5545**

**Username: tyoum@nortelnetworks.com**

Integrating next generation multimedia services to existing telephones

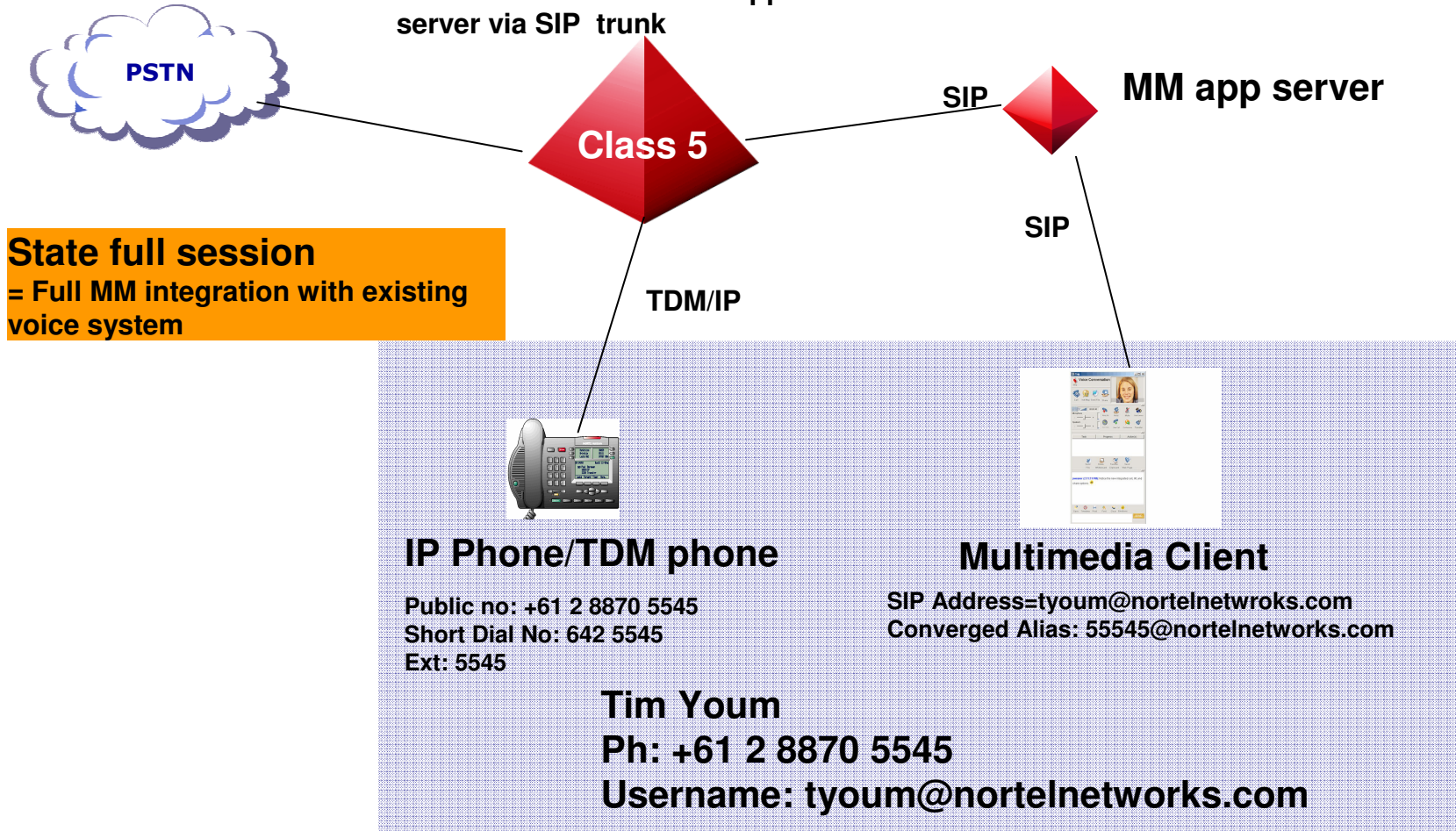
# Call Flow: call from CD to CD (IN-SIP-Dialog)



Integrating next generation multimedia services to existing telephones

# 3: Converged Desktop Solution: SIP Message

DN=02 8870 5545, 642 5545, 5545  
Has Simultaneous Ring feature to start the SIP dialog session to virtual no "5545" to MM app server via SIP trunk



**State full session**  
= Full MM integration with existing voice system

## IP Phone/TDM phone

Public no: +61 2 8870 5545  
Short Dial No: 642 5545  
Ext: 5545

## Multimedia Client

SIP Address=tyoum@nortelnetworks.com  
Converged Alias: 55545@nortelnetworks.com

**Tim Youm**

**Ph: +61 2 8870 5545**

**Username: tyoum@nortelnetworks.com**

Integrating next generation multimedia services to existing telephones

# Converged Desktop



























## *Common Multimedia Feature Definitions*

<b>TDM Voice Feature Preservation</b>	All system telephony features work the same after Converged Desktop is added
<b>Presence</b>	Reports if you are Online, Inactive, On the Phone, Away...to other users
<b>Personal Agent</b>	Call Manager (screening, routing), Directories, User Settings, Web Client
<b>Call Logging</b>	Inbox and Outbox records for all calls - accessible from PC Client
<b>Picture Calling Line ID</b>	A photo of the Calling Party is presented in the Call Control "Screen Pop"
<b>Instant Messaging</b>	IM between any two users. Multiple simultaneous sessions are supported
<b>File Transfer</b>	Send any file on your PC directly to another user
<b>White Boarding</b>	Collaborate simultaneously with another user using this drawing/text tool
<b>Web Page Push</b>	Send a Web Page directly to another user – their browser will auto-launch
<b>Clip Board Transfer</b>	Send the contents of your Clip Board directly to another user
<b>Click To Call</b>	Click on Directory Entry, Call Log, Outlook Message to place a call
<b>Point to Point Video</b>	Point to point video - automatically launches and ends with voice call

# Converged Desktop

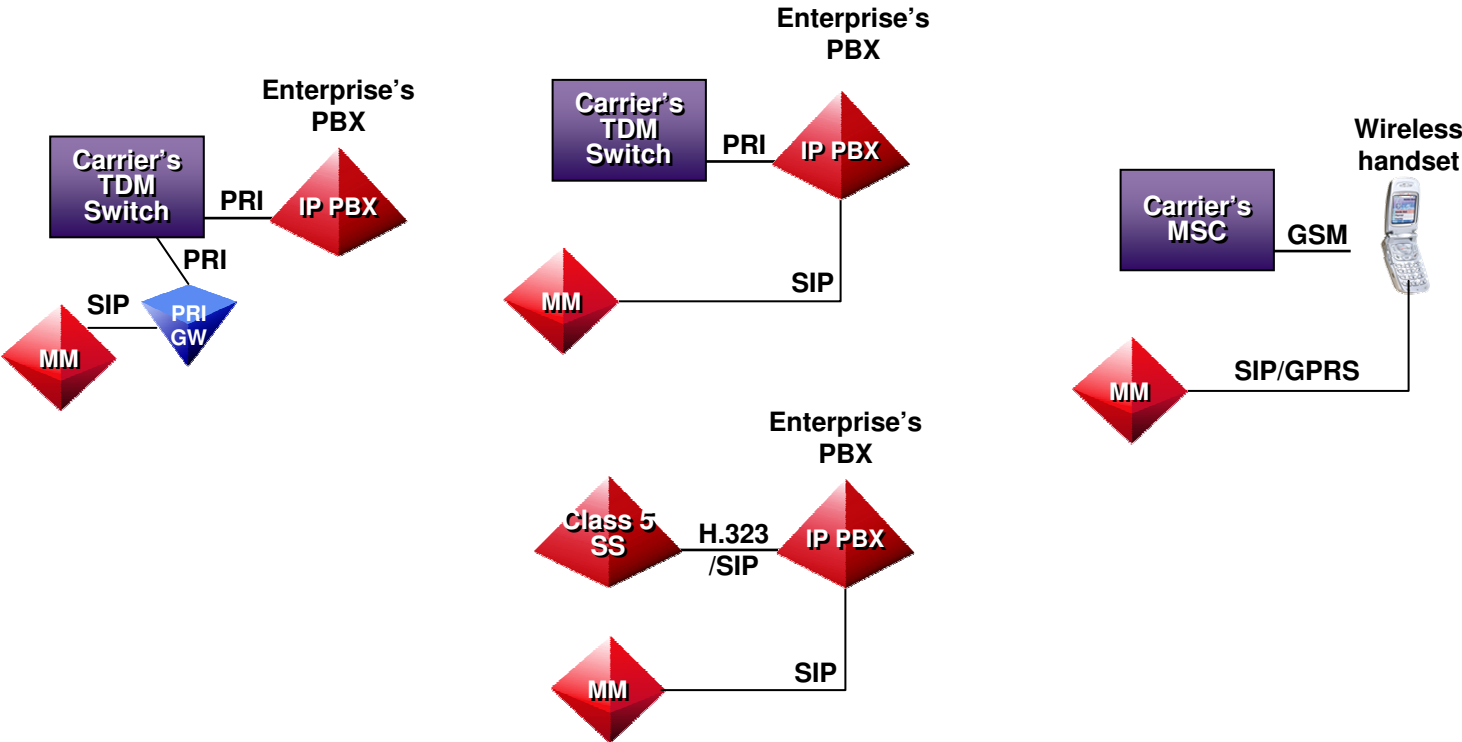
## Feature Support per implementation

-  Full
-  Partial
-  Not Available

<u>Feature</u>	<u>PRI / SIP- T SimRing Calls</u>	<u>IN(CS1R)/SIP Messaging</u>
Voice Feature Preservation		
Presence	 (only manual – no auto-presence)	 (manual and auto-presence)
Follow me Find me	 (use of Routes can be complex due to SIMRING)	 (less Routing interactions as there is no SIMRING provisioning)
Call Logging	 (incoming call only)	 (incoming & outgoing calls)
Picture Calling Line ID		
Instant Messaging		
File Transfer		
White Boarding		
Web Page Push		
Clip Board Transfer		
Click To Call		
Video	 (Video session is sperate to Voice)	
Call Control (Call Hold, Call forward etc)		

Integrating next generation multimedia services to existing telephones

# Other potential areas



Integrating next generation multimedia services to existing telephones

## Summary

### Converged Desktop Solution allows to

#### Telephony Device



*Extensive Voice Services  
Reliability*

**PLUS**

#### Multimedia Device



- Video
- IM/Presence
- Collaboration
- Mobility

*Multimedia Capability  
Flexibility  
Mobility*

- Reference: [draft-ietf-sipping-3pcc-02.txt](#)

Integrating next generation multimedia services to existing telephones