

CHANGE REQUEST

⌘ **33.234 CR 058** ⌘ rev **1** ⌘ Current version: **6.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ⌘ ME Radio Access Network Core Network

Title:	⌘ WLAN AN providing protection against IP address spoofing		
Source:	⌘ NOKIA, ZTE		
Work item code:	⌘ WLAN	Date:	⌘ 10/01/2005
Category:	⌘ F	Release:	⌘ Rel-6
Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: Ph2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) Rel-7 (Release 7)	

Reason for change:	⌘ For WLAN Direct IP Access there exists potential IP address spoofing attack if the charging is based on IP address. It's WLAN AN's duty to defeat this kind of attack.		
Summary of change:	⌘ Add a description of IP address spoofing attack against WLAN AN in the Annex C3.3.		
Consequences if not approved:	⌘ WLAN provider may not be aware of this threat of IP address spoofing attack against WLAN Direct IP Access.		

Clauses affected:	⌘ Annex C3.3						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications ⌘	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	X	<input checked="" type="checkbox"/>				
X							
<input checked="" type="checkbox"/>							
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	X	<input checked="" type="checkbox"/>				
X							
<input checked="" type="checkbox"/>							
Other comments:	⌘						

*** BEGIN OF CHANGE ***

C.3.3 Attacks at the WLAN AN Infrastructure

Attacks can be performed at the WLAN AN infrastructure, e.g. Access Points (AP), the LAN connecting the APs, Ethernet switches etc. To perform any type of attacks "inside" the WLAN AN, the attacker needs access to the network in some way. For ordinary wired networks, an attacker needs to somehow hook up to the wires to get access. The WLAN AN is partially a wired network, and an attacker may hook up to that part of the network. In public spaces the APs and corresponding wired connections may be physically accessible by attackers. Simply connecting a laptop to the wired LAN "behind" the APs may give the attacker free access to WLAN services as well as access to other user's data and signalling traffic.

Depending on where charging data is collected, an attacker with access to the wired LAN of the WLAN AN can also interfere with the charging functions. If the volume based charging model is applied, an attacker could e.g. inject packets with any chosen source or destination MAC and IP addresses, just to increase a user's bill.

[For WLAN Direct IP Access if the charging is based on IP address, there exists a threat of IP address spoofing attack against the WLAN AN, which may generate incorrect accounting message for users.](#)

[Note: 3GPPP suggest WLAN operators not using IP address based accounting; otherwise there should be sufficient countermeasures against IP address spoofing attack in the WLAN AN.](#)

*** END OF CHANGE ***