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22651 U.S. PTO

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**PROVISIONAL APPLICATION FOR PATENT COVER SHEET**  
 This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

INVENTOR(S)					
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<input checked="" type="checkbox"/> Additional inventors are being named on the <u>2nd</u> separately numbered sheets attached hereto					
TITLE OF THE INVENTION (280 characters max)					
METHOD AND APPARATUS FOR FEEDBACK AND LOCATION UPDATE					
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ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification		Number of Pages		24	
<input type="checkbox"/> Drawing(s)		Number of Sheets		<input type="checkbox"/> CD(s), Number	
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76				<input type="checkbox"/> Other (specify)	
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)					
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<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.					
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are:					

22151 U.S. PTO 60/580206

062404

Respectfully submitted,  
 SIGNATURE   
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Date 06/24/2004  
 REGISTRATION NO. 40,476  
 (if appropriate)  
 Docket Number: 71493-1295

**USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT**

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**PROVISIONAL APPLICATION COVER SHEET**  
*Additional Page*

PTO/SB/16 (8-00)  
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Docket Number	7-1493-1295	Type a plus sign (+) inside this box →	+
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INVENTOR(S)/APPLICANT(S)		
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Number 2 of 2

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Method and Apparatus for Feedback and Location Update

Various methods are provided for providing feedback from mobile stations to a network. One or more of these methods might for example be implemented in IEEE802.16e

5 Downlink and Uplink systems.

PART-ONE: MSS fast signaling for feedback/intention indication

Background of the Invention

In order to facilitate the DL data transmission, some information of feedback, such as C/I measurements and MSSs' indications, such as MIMO/permutation modes is needed to be sent from MSSs.

In 802.16e, fast-feedback channel is introduced to enable such operation. In 802.16e/D3, two types of fast feedback operations are defined:

- 15           1) unicast Fast-Feedback allocation subheader can be used to let MSS to feedback one of 4 types of information using the temporarily assigned fast-feedback channel
- 2) broadcast CQICH\_alloc\_IE can be used to allocate dedicated feedback channel (CQICH) with periodical
- 20           opportunity enabling MSS to provide MIMO related intention (indication).

The above two approaches provide quasi-periodical opportunity to enable MSSs to provide their indication and feedback.

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