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22651 U.S. PTO

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

INVENTOR(S)			
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Additional inventors are being named on the 2nd separately numbered sheets attached hereto

**TITLE OF THE INVENTION (280 characters max)**  
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Application Data Sheet. See 37 CFR 1.76

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The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

No.

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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 TELEPHONE 613-232-2486

Date   
 REGISTRATION NO.   
 (if appropriate)  
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*Additional Page*

PTO/SB/16 (8-00)  
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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
- 20 2) broadcast CQICH\_alloc\_IE can be used to allocate dedicated feedback channel (CQICH) with periodical 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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