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| Project | **IEEE 802.21 MIHS**  **<**[**http://www.ieee802.org/21/**](http://www.ieee802.org/21/)**>** | |
| Title | **An Algorithm for Complete Subtree Creation** | |
| DCN | **21-13-0205-00-MuGM** | |
| Date Submitted | **November 11, 2013** | |
| Source(s) | Yoshihiro Ohba (Toshiba) |  |
| Re: | IEEE 802.21 Session #59 in Dallas | |
| Abstract | This document describes an algorithm for generating complete subtree for GKB. | |
| Purpose | To addresses LB7a Comment #136. | |
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# **Proposal**

Add the following python code to 9.4.2.5.1.

def CreateCompleteSubtree(I, T, R):

# Input I: List of indices of leaf nodes to be included in the group

# Input T: The entire tree that covers all leaf nodes

# Input R: Root node of the entire tree

# Output S: Complete Subtree for the group.

S=[]

def check(n):

# Input n: subtree root node

# Output 0, 1

# 0 : Some node in the subtree is a non-member of the group.

# 1 : All nodes in the subtree are members of the group.

if n.left==None and n.right==None: # n is leaf

if n.index.val in I:

S.append(n)

return 1

return 0

# n is non-leaf

lval=check(n.left)

rval=check(n.right)

if lval\*rval>0:

S.remove(n.left)

S.remove(n.right)

S.append(n)

return 1

return 0

check(R)

return S