Subject: BYTSCL bug!?
Posted by spidersapiens on Tue, 03 Mar 2009 17:05:00 GMT
View Forum Message <> Reply to Message

I've recently been converting some IDL code to Java and found this problem: BYTSCL returns different results based on the data type you pass in. For example, the two lines below return different results for 9065.

print, bytscl([4124, 9065, 18946], top = 2)
print, bytscl(FLOAT([4124, 9065, 18946]), top = 2)

That's fine. Later on I found the explanation in IDL's documentation "For floating-point input, each value is scaled using the formula (Top + 0.9999)*(x - Min)/(Max - Min). For integer input, each value is scaled using the formula ((Top + 1)*(x - Min) - 1)/(Max - Min). ".

No problem, I can use their formulas. But the bad thing somehow they're not using the formula for integer to do the actual calculation. Here's the evidence

print, bytscl([4124, 9065, 18946], top = 2) gives me 0 on 9065.

But if you use their formula for compute it, ((2 + 1) * (9065 - 4124) - 1) / (18946 - 4124) gives me 1.

This is frustrating me a lot because I need to duplicate the exactly same numeric results in Java. But with this buggy BYTSCL, it's almost impossible to duplicate its behavior. Anybody has any idea what formula they're using internally?

Thanks!