
Downstream wavelength option

Keiji Tanaka

KDDI R&D Labs. Inc.

Naoto Saeki

NEC

Through the study on downstream wavelength plan, I recognize how difficult to specify the downstream wavelength because the situation of broadband services and its access technologies varies widely depending on countries or operators. One of solutions to resolve this problem is to create options for the wavelength plan. For example,

(Option-1) : 1480~1500nm for green-field deployments,

(Option-2) : 1574~1580nm for the co-existence among 1G-, 10G-EPON and RF-video.

The pros and cons of creating options are summarized in the following table.

Pros	Cons
<ul style="list-style-type: none">• Operators can flexibly shift the wavelength depending on the changes of broadband service situation.• Operators can select the suitable wavelength for their own services.• Market can decide suitable wavelength.	<ul style="list-style-type: none">• There would be stock problems and accidental mix-up.• Two wavelength options may become an obstacle to lower the optical Tx cost.• The draft may become complex.• The number of PMD name increases.