

# Deep Redundancy for the Opus Codec

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IETF 121

# Changes Since IETF 120

- Specified decoder architecture
- Using functional notation
  - Not valid PyTorch/TF
- Names match the weights file

```
t1 = dense1(Z)
t2 = cat(t1, conv1(t1))
t3 = cat(t2, glu1(gru1(t2)))
t4 = cat(t3, conv2(t3))
t5 = cat(t4, glu2(gru2(t4)))
t6 = cat(t5, conv3(t5))
t7 = cat(t6, glu3(gru3(t6)))
t8 = cat(t7, conv4(t7))
t9 = cat(t8, glu4(gru4(t8)))
t10 = cat(t9, conv5(t9))
t11 = cat(t10, glu5(gru5(t10)))
x = output(t11)
```

# Weights Publishing Proposal

- Publish training procedure
  - PyTorch scripts (in RFC appendix)
  - Training data (~100 GB)
  - Full PyTorch model output (10 MB)
- Possible to verify that published weights are stable points

# Open Questions

- Where to publish the weights?
- Where to publish training data and artifacts?