

Adversarial Generation of Time-Frequency Features

with application in audio synthesis

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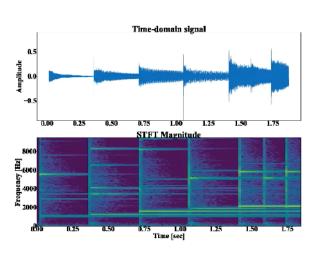


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Time to time-frequency









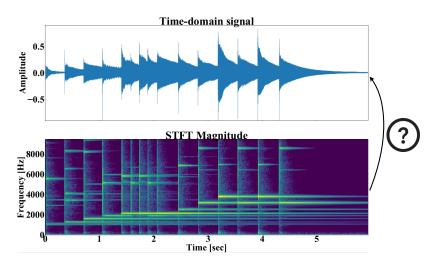
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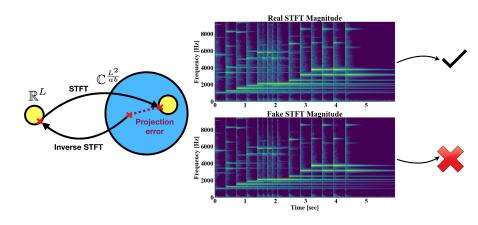
Time-frequency to time





Is it consistent?



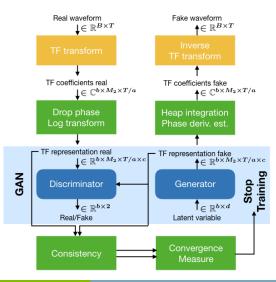




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Applied to GANs









Evaluation



- We trained on a dataset of spoken English digits [0-9].
- We evaluated our results with perceptual tests.
- Audio examples and implementations are available at tifgan.github.io

| WaveGAN | N digits TiFO | GAN-M digits |
|---------|-----------------|--------------|
| | vs TiFGAN | vs WaveGAN |
| Real | 86% | 94% |
| TiFGAN | _ | 75% |
| WaveGAN | 25% | _ |

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