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```
clc;
clear;
close all;
```

Parameters

Generate delay values

```
delay = randn(1, num_paths) * delay_spread + max_delay / 2;
```

Create time axis

```
t = 0:max_delay;
```

Initialize PDP

```
pdp = zeros(size(t));
```

Generate PDP

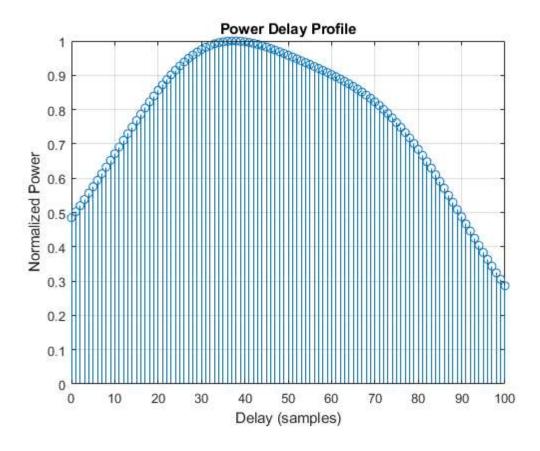
```
for i = 1:num_paths
    pdp = pdp + 10^(power_dB(i)/10) * exp(-(t - delay(i)).^2 / (2 * delay_spread^2));
end
```

Normalize PDP

```
pdp = pdp / max(pdp);
```

Plot PDP

```
stem(t, pdp);
xlabel('Delay (samples)');
ylabel('Normalized Power');
title('Power Delay Profile');
grid on;
```



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