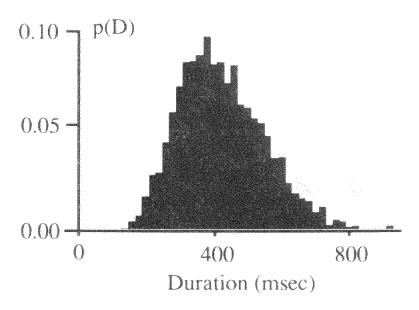
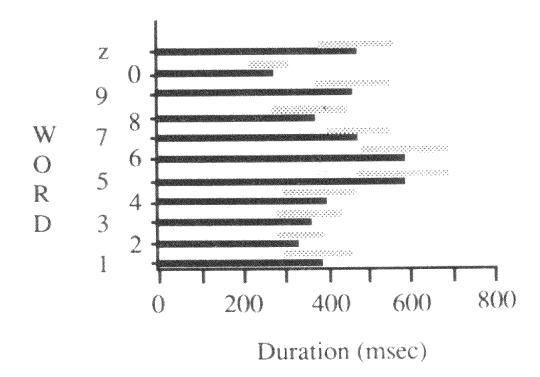
Seed Model Construction: Duration Distributions

Durations For All Isolated Digits

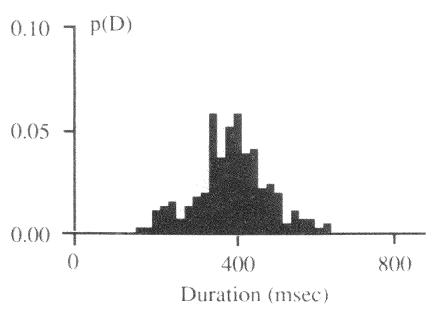


Mean: 408 msec Standard Deviation: 125 msec



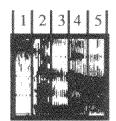
Seed Model Construction: Number of States Proportional to Duration



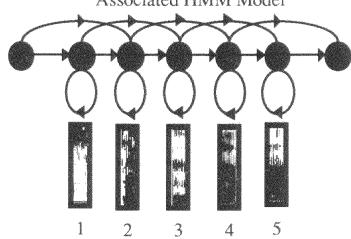


Mean: 366 msec Standard Deviation: 88 msec

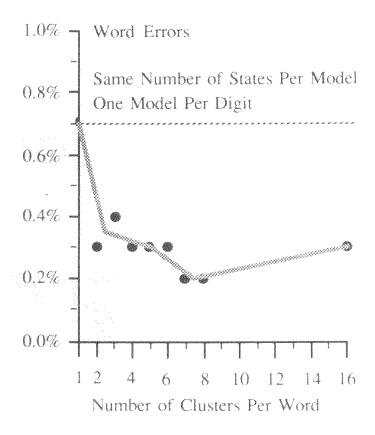
Input Token

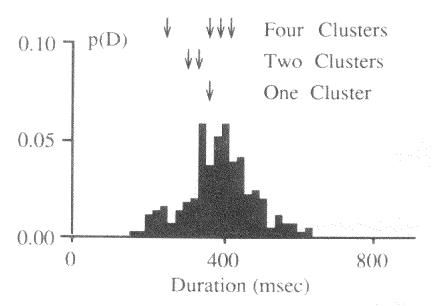


Associated HMM Model



Duration in Context Clustering



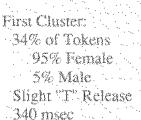


One Cluster: Male Seed

Two Clusters: One Male/One Female Four Clusters: Two Female/One Male/

One Short Model

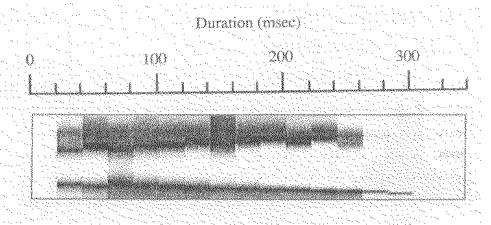
Examples of Word Models

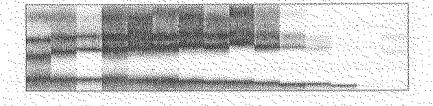


Second Cluster:
30% of Tokens
97% Male
3% Female
Slight "T" Release
300 msec

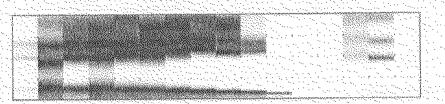
Third Cluster
20% of Tokens
0% Male
100% Female
Unreleased "T"
260 msec

Fourth Cluster:
16% of Tokens
87% Male
13% Female
Strong "T" Release
320 msec



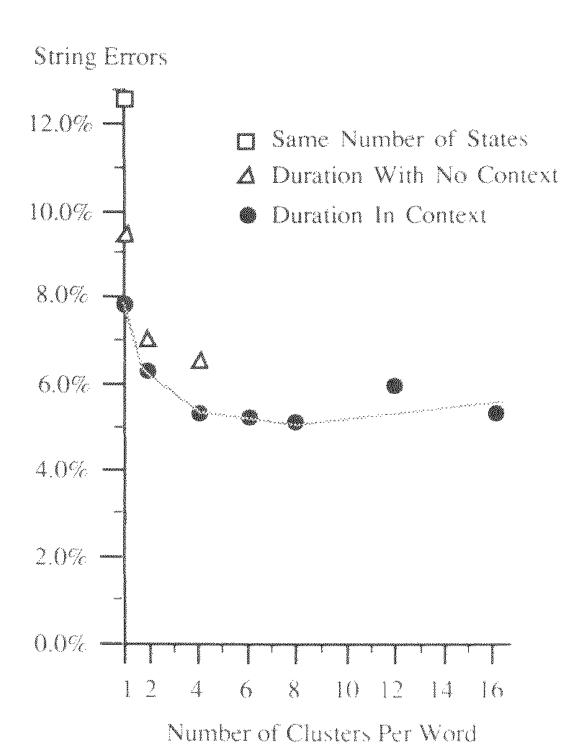








Performance For Various Model Types



Putting It All Together: How Do We Build A System? Class Participation Required:)

