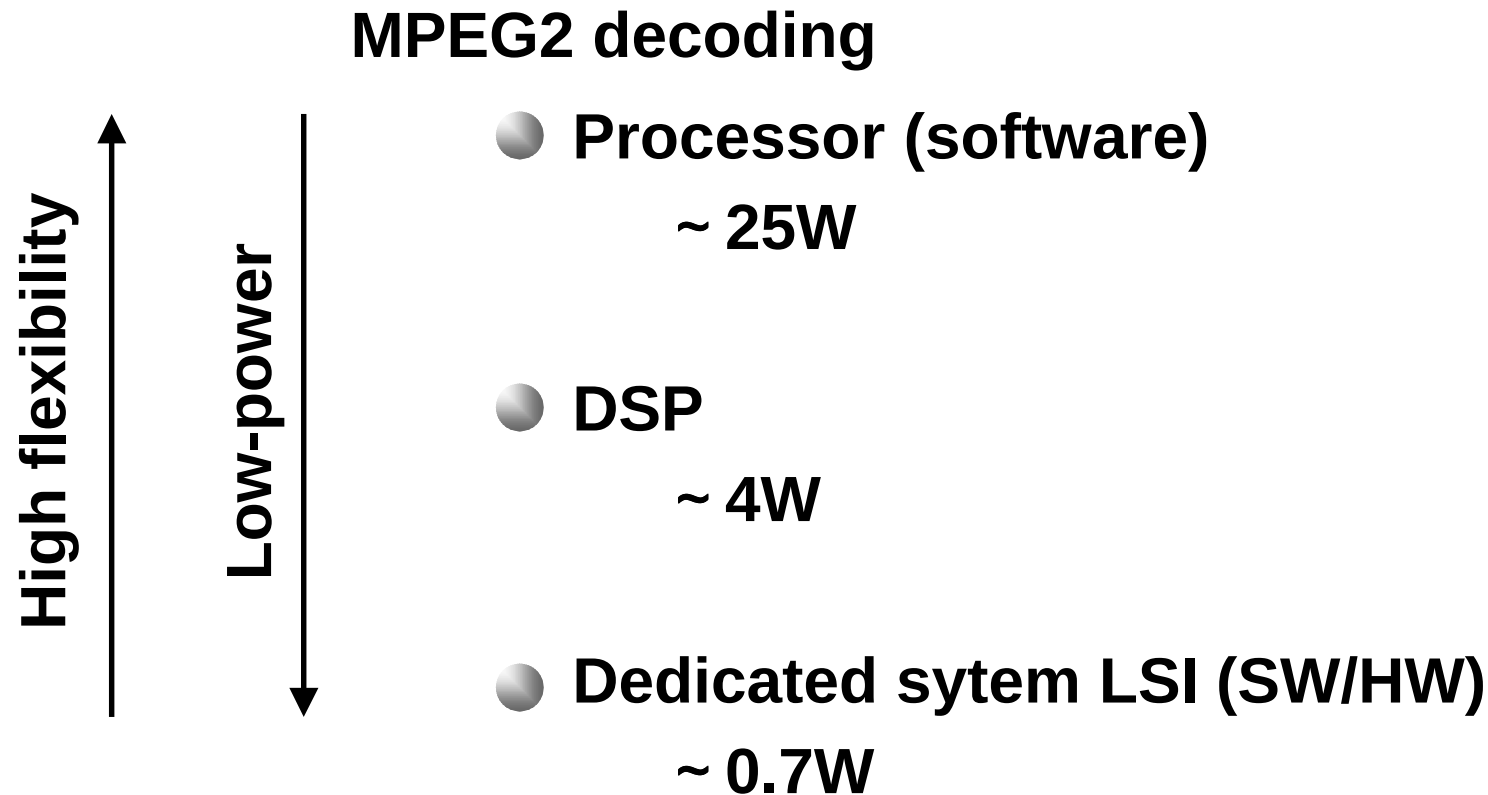
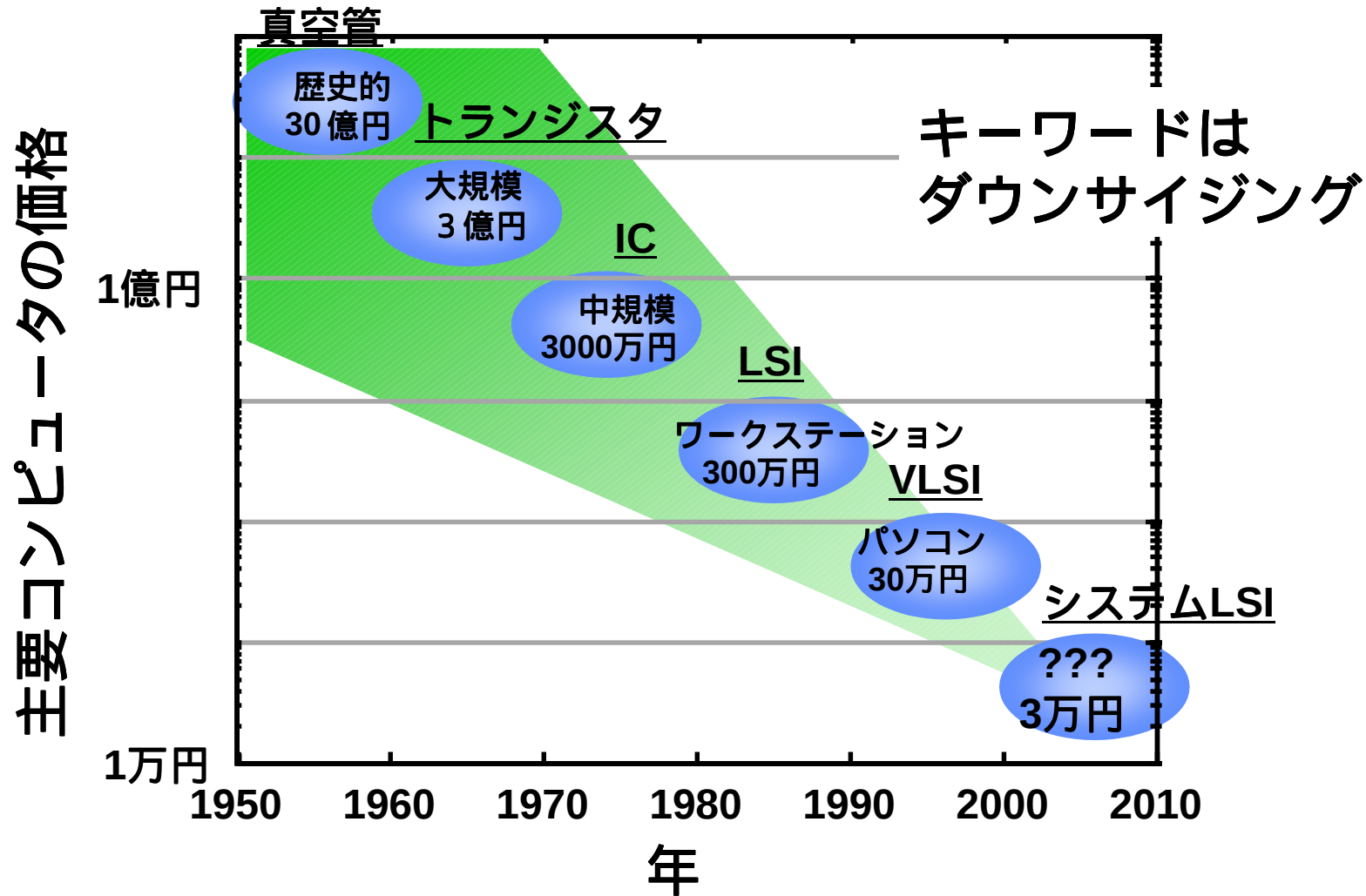


Approach for low-power LSI

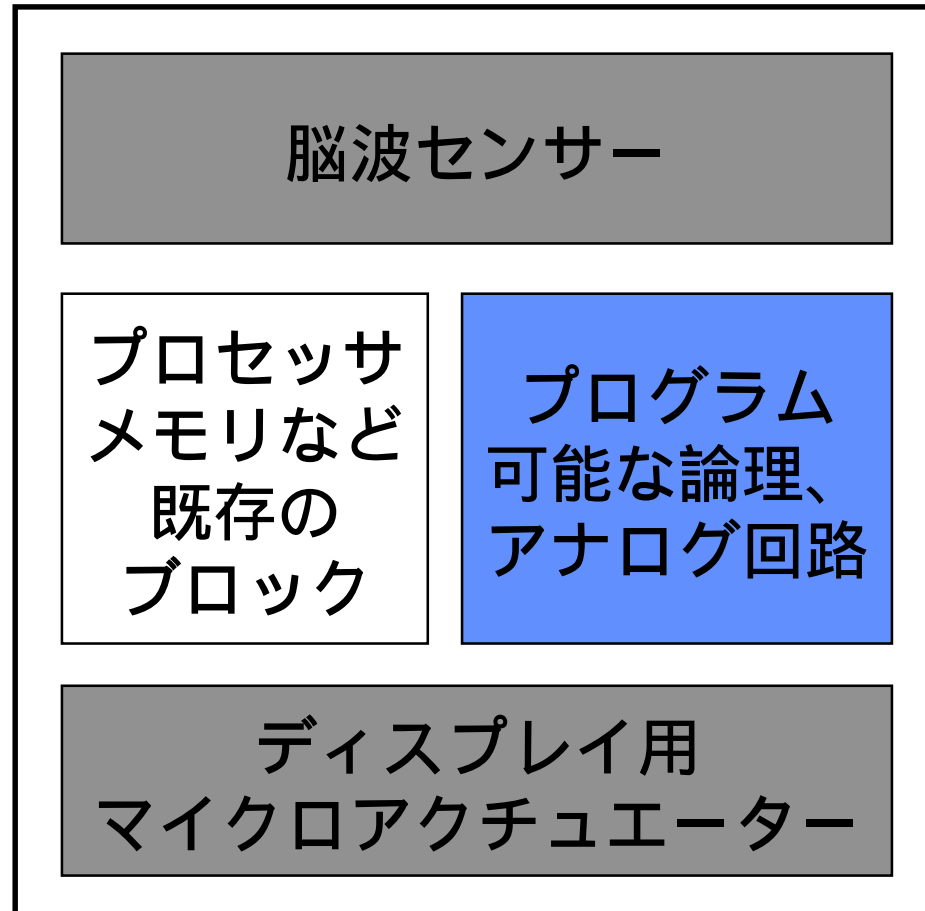


コンピュータのトレンド



出典：機械統計年鑑

2015年のLSI



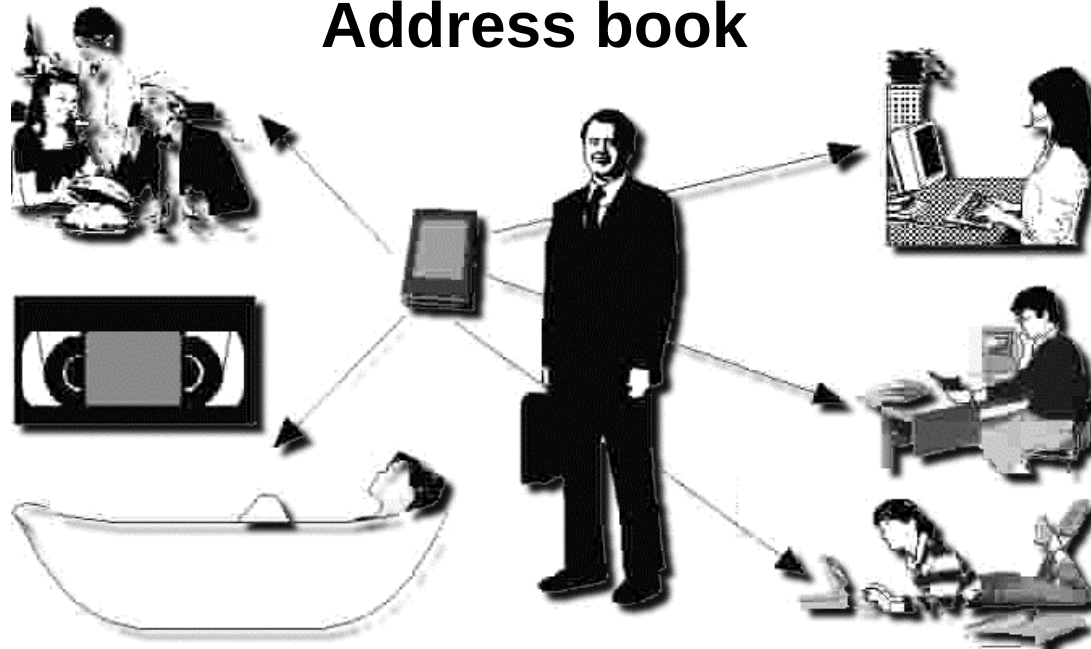
- センサーやアクチュエーターが集積化
- 0.04 μ m 100億シリコン素子
- クロック周波数は20ギガヘルツ（全体としては非同期）
- 準3次元積層構造

Computer-Communication-Consumer

Cell phone
Tecketing
Reservation

PDA
Schedule
Address book

E-cashing
E-trading
E-banking

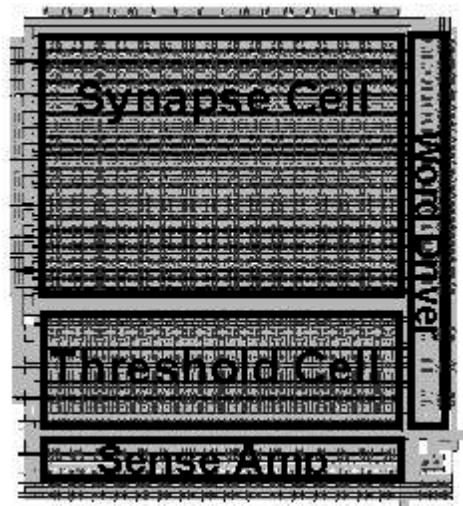


Internet
Web brouse
Web TV
E-mail

Home automation
Game on net
Entertainment

Computer centric →
Communication centric,
Display centric

Neural chip



3 orders of magnitude smaller power consumption for recognition compared to software implementation