## NDN Stack for ESP8266 Microcontroller

- Meet the ESP8266
  - 80MHz RISC CPU, 96KB data RAM
  - 802.11 b/g/n WiFi chip, full TCP/IP stack
  - GPIO pins, analog input, etc
  - small package, USD \$3 each
- esp8266ndn library:
  - Arduino library to bring NDN to ESP8266
  - Face with UDP transport, Interest+Data, no dispatch
  - ndnping client and server, no prefix registration
- This project: let ESP8266 do more NDN
  - prefix registration
  - ECDSA signing and verification
  - Nack



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- The little ESP8266 is western maker's favorite microcontroller with built-in WiFi.
  - Giving it NDN makes it more powerful, and makes NDN more appealing.
- You need:
  - knowledge about signed Interests
  - C++11, ndn-cxx or ndn-cpp-lite API
  - Arduino IDE and NFD on your computer, a full size USB 2.0 port
- Project author will loan 2x ESP8266 Witty Cloud boards.
  - Max team size is 3. Some tasks do not require using an ESP8266 all the time.
- Project demos:
  - ndnping server with prefix registration and Nack
  - light control with ECDSA verification