Dafuq heb ik gedaan tijdens het Onderzoek

Doorlopen stappen tijdens de realisatie

BMPTK

* Vlaggen gevuld
* <<De vlaggen die gevuld zijn en waarmee>>
* Functie gemaakt voor het maken van mappen in de build folder
* Target gemaakt voor de ESP32\_Dev\_Kit
* Target gemaakt voor de ESP32
* Target gemaakt voor de Xtensa LX6 processoren
* Target gemaakt voor de Xtensa common instellingen

Target selectie:

ifeq ($(TARGET),"esp\_devkit\_v1")

CHIP ?= esp\_wroom\_32

# by default the chip runs at 80 MHz

XTAL ?= 80000

Endif

#=========================================================================

#

# Tensilica Xtensa chips common

#

#=========================================================================

define GenerateComponentInfo

COMPONENT\_ADD\_INCLUDEDIRS :=

COMPONENT\_SRCDIRS :=

$(eval COMPONENT\_PATH := $(COMPONENT\_PREFIX\_PATH)/$(1))

COMPONENT\_PATHS += $(COMPONENT\_PATH)

$(eval include $(COMPONENT\_PATH)/component.mk)

$(eval COMPONENT\_INCLUDE\_DIRS := )

$(foreach dir, $(COMPONENT\_ADD\_INCLUDEDIRS), \

$(eval COMPONENT\_INCLUDE\_DIRS += $(subst /.,,$(COMPONENT\_PATH)/$(dir)))\

$(eval INCLUDES += -I$(subst /.,,$(COMPONENT\_PATH)/$(dir)))\

)

$(eval LDFLAGS += $(COMPONENT\_CFLAGS))

$(eval CLEAN += SOURCES)

endef

define GenerateComponentSources

$(eval COMPONENT\_PATH := $(COMPONENT\_PREFIX\_PATH)/$(1))

$(eval include $(COMPONENT\_PATH)/component.mk)

$(eval COMPONENT\_INCLUDE\_DIRS := )

$(foreach dir, $(COMPONENT\_ADD\_INCLUDEDIRS), \

$(eval COMPONENT\_INCLUDE\_DIRS += $(subst /.,,$(COMPONENT\_PATH)/$(dir)))\

$(eval INCLUDES += -I$(subst /.,,$(COMPONENT\_PATH)/$(dir)))\

)

$(eval COMPONENT\_SOURCE\_DIRS :=)

$(foreach dir, $(COMPONENT\_SRCDIRS), \

$(eval COMPONENT\_SOURCE\_DIRS += $(subst /.,,$(COMPONENT\_PATH)/$(dir)))\

$(eval SEARCH += -I$(subst /.,,$(COMPONENT\_PATH)/$(dir)))\

)

$(foreach src, $(COMPONENT\_SOURCES), \

$(eval SOURCES += $(src))\

)

endef

COMPONENT\_PATHS :=

define Xtensa

$(eval $(Embedded))

$(eval HEAP := NATIVE)

$(eval PROJECT\_PATH:= $(abspath $(dir $(firstword $(MAKEFILE\_LIST)))))

$(eval ESP\_CORE := $(BMPTK)/targets/esp/esp32)

$(eval ESP\_TARGET := $(BMPTK)/targets/esp)

ESP\_CORE := $(BMPTK)/targets/esp/esp32

# SEARCH += $(BMPTK)/targets/esp/esp-wroom-32

INCLUDES += -I$(PROJECT\_PATH)/build/include

$(eval SOURCE\_COMPONENTS := bmptk-core)

$(eval COMPONENT\_PREFIX\_PATH := $(BMPTK)/drivers/esp/esp-idf/components)

$(foreach component, $(COMPONENTS), $(eval $(call GenerateComponentInfo,$(component))))

$(foreach component, $(SOURCE\_COMPONENTS), $(eval $(call GenerateComponentSources,$(component))))

include $(IDF\_PATH)/make/bmptk.mk

LINKERSCRIPT := esp32\_out.ld

# LN\_TEMPLATE := $(ESP\_CORE)/ld/esp32.c $(PROJECT\_PATH)/sdkconfig.h

COMMON += -D BOOTLOADER\_BUILD=1

CORE\_FLAGS += -nostartfiles

ALL\_LIBRARIES += -L$(ESP\_CORE)/lib/

ALL\_LIBRARIES += -L$(BMPTK)/drivers/esp/esp-idf/components/newlib/lib/

ALL\_LIBRARIES += -lcore \

-lrtc \

-lnet80211 \

-lpp \

-lwpa \

-lsmartconfig \

-lcoexist \

-lwps \

-lwpa2 \

-lespnow \

-lphy \

-lmesh \

-lm \

-lc \

-lg \

-lc\_nano

LIBS += -L"$(ESP\_CORE)/lib/"

LDFLAGS += -L$(ESP\_CORE)/lib/

export LDFLAGS

export COREFLAGS

include $(IDF\_PATH)/make/bmptk\_flags.mk

OBJ += bmptk\_startup\_esp32.o

CPU ?= XtensaLX6

ROOT := call\_start\_cpu0

TARGET\_C\_FLAGS += -mlongcalls

TARGET\_CPP\_FLAGS += -mlongcalls

endef

define Xtensa\_LX6

$(eval $(Xtensa))

# ARCH\_FLAGS := -mcpu=xtensa-lx6 -mthumb -fomit-frame-pointer -march=armv7-m

endef

#======================================================================

#

# Tensilica xtensa chips:

#

# Tensilica Xtensa LX6

#

#======================================================================

define esp\_wroom\_32

$(eval ESP\_EABI := xtensa-esp32-elf)

$(eval GCC\_LX6 := $(BMPTK)/targets/esp/esp-wroom-32/xtensa-esp32-elf/bin)

$(eval PREFIX := $(GCC\_LX6)/$(ESP\_EABI)-)

# $(eval CONFIG\_TOOLPREFIX := $(GCC\_LX6)/$(ESP\_EABI)-)

LINKER +=

$(eval $(Xtensa\_LX6))

ROM\_START ?= 0x40000000

RAM\_START ?= 0x40070000

PORT\_CHECK ?= $(CHECK\_PORT) $(SERIAL\_PORT)

# RUN\_PRE := $(DUE\_BOOTMODE)

RESULTS += $(BIN)

# Advised flash command: esptool --chip esp32 --port $(SERIAL\_PORT) --baud $(CONSOLE\_BAUDRATE) --before default\_reset --after hard\_reset write\_flash -z --flash\_mode dio --flash\_freq 40m --flash\_size detect 0x1000 $(PROJECT\_PATH)/blink/build/bootloader/bootloader.bin 0x10000 $(PROJECT\_PATH)/build/$(PROJECT).bin 0x8000 $(PROJECT\_PATH)/build/partitions\_singleapp.bin

$(eval SINGLEAPP\_BIN := $(PROJECT\_PATH)/build/partitions\_singleapp.bin)

$(eval PROJECT\_BIN := $(PROJECT\_PATH)/build/$(PROJECT).bin)

$(eval BOOTLOADER\_BIN := $(PROJECT\_PATH)/build/bootloader/bootloader.bin)

RUN := esptool --chip esp32 --port $(SERIAL\_PORT) --baud $(CONSOLE\_BAUDRATE) --before default\_reset --after hard\_reset write\_flash -z --flash\_mode dio --flash\_freq 40m --flash\_size detect 0x1000 $(BOOTLOADER\_BIN) 0x10000 $(PROJECT\_BIN) 0x8000 $(SINGLEAPP\_BIN)

DEFINES += -DDONT\_USE\_CMSIS\_INIT

DEFINES += -DBMPTK\_INCLUDE\_CHIP=xtensa-versions.h

RUN\_TERMINAL ?= $(PREFIX)gdb.exe -ex "set serial baud $(CONSOLE\_BAUDRATE)" -ex "target remote $(SERIAL\_PORT)" -ex interrupt build/$(PROJECT).elf

endef

ifeq ($(CHIP),esp\_devkit\_v1)

$(eval $(esp\_wroom\_32))

ROM\_SIZE ?= 512k

RAM\_SIZE ?= 96k

STACK\_SIZE ?= 73728

DEFINES +=

endif