

ACQ1001+ACQ430 Quickstart

Get cs-studio runtime:

<https://ics-web.sns.ornl.gov/css/products.html>

WIN64 LINUX

```
mkdir css; cd css unzip basic-epics*.zip
```

```
cd basic-epics*; ./css
```

Get OPI Operator Interface set

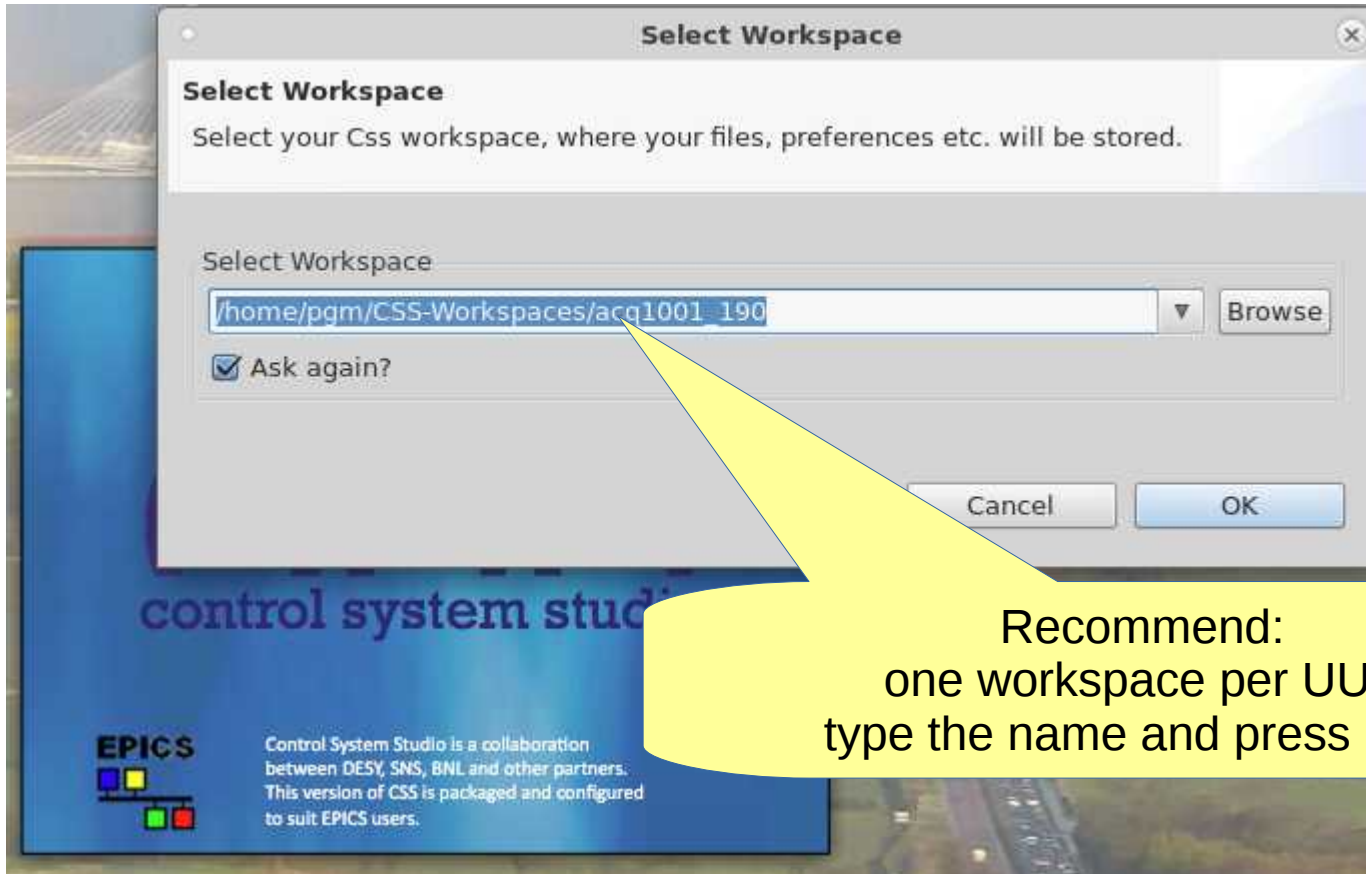
<https://github.com/petermilne/ACQ400CS>

ZIP FILE

```
mkdir PROJECTS; cd PROJECTS
```

```
cd unzip; unzip ACQ400CSS-master.zip
```

Create cs-studio workspace..



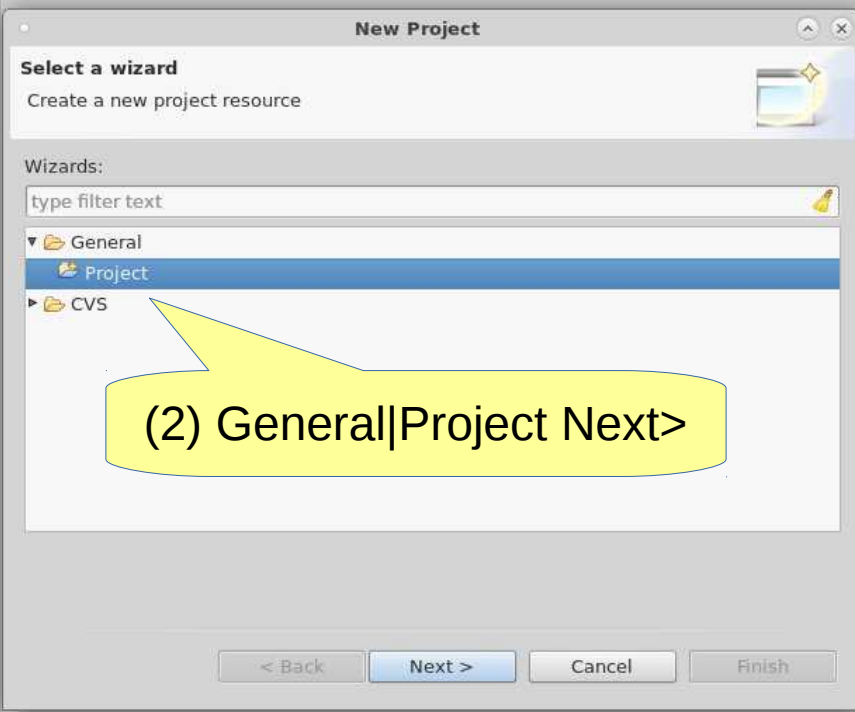
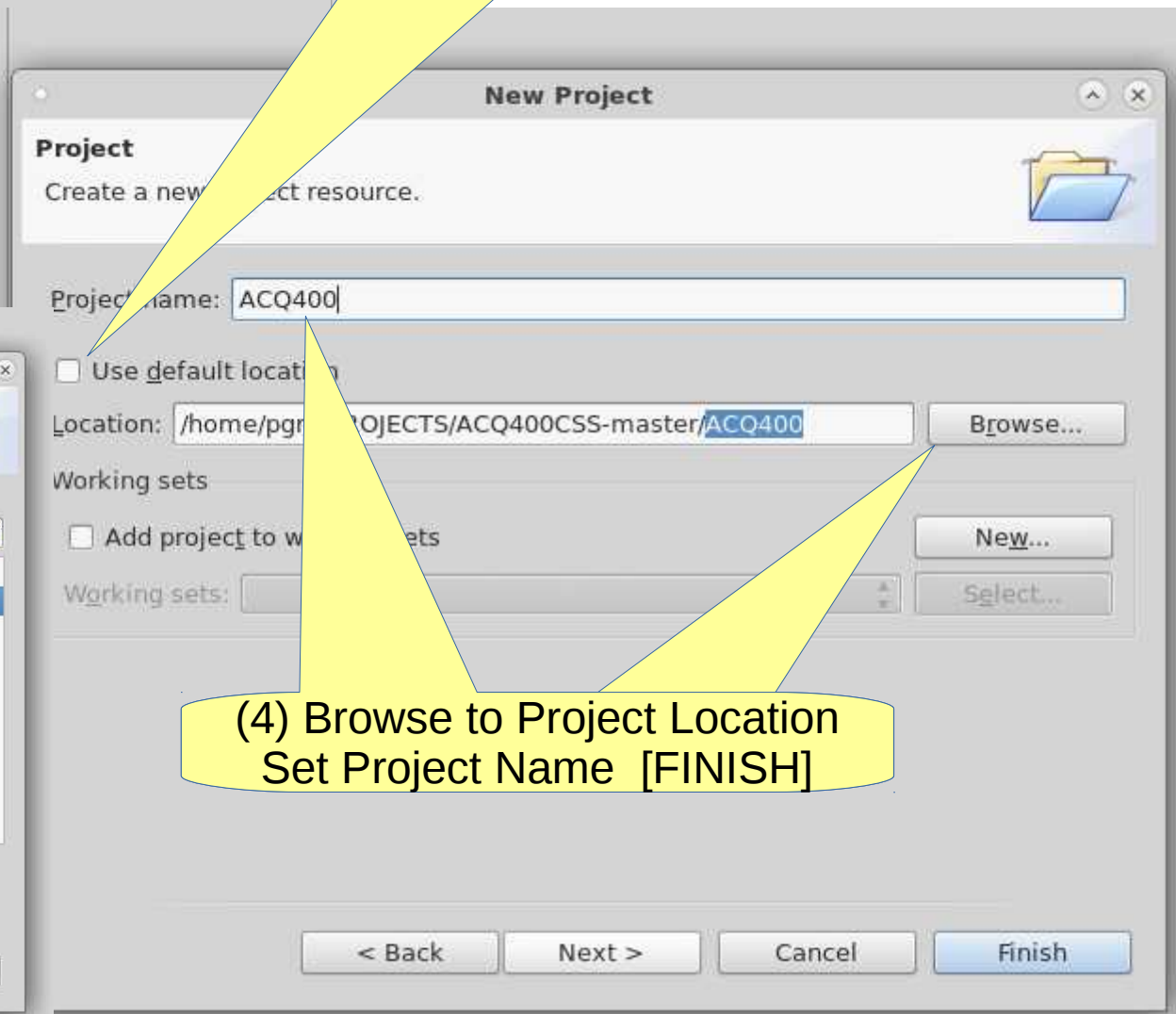
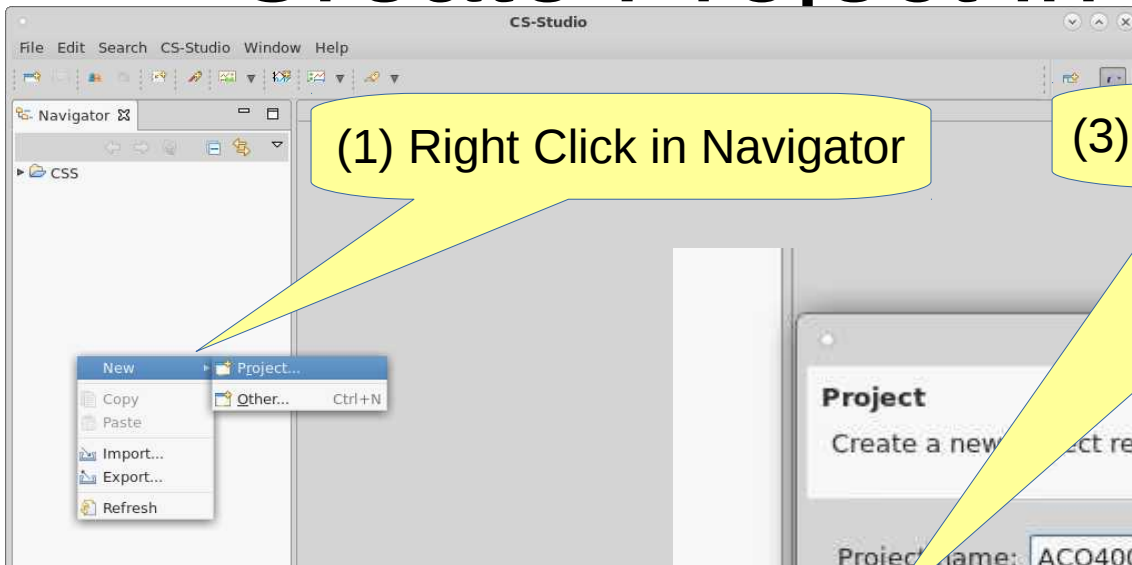
Create Project in Workspace..

(1) Right Click in Navigator

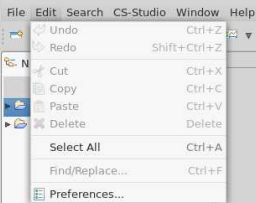
(3) Uncheck Use Default Location

(2) General|Project Next>

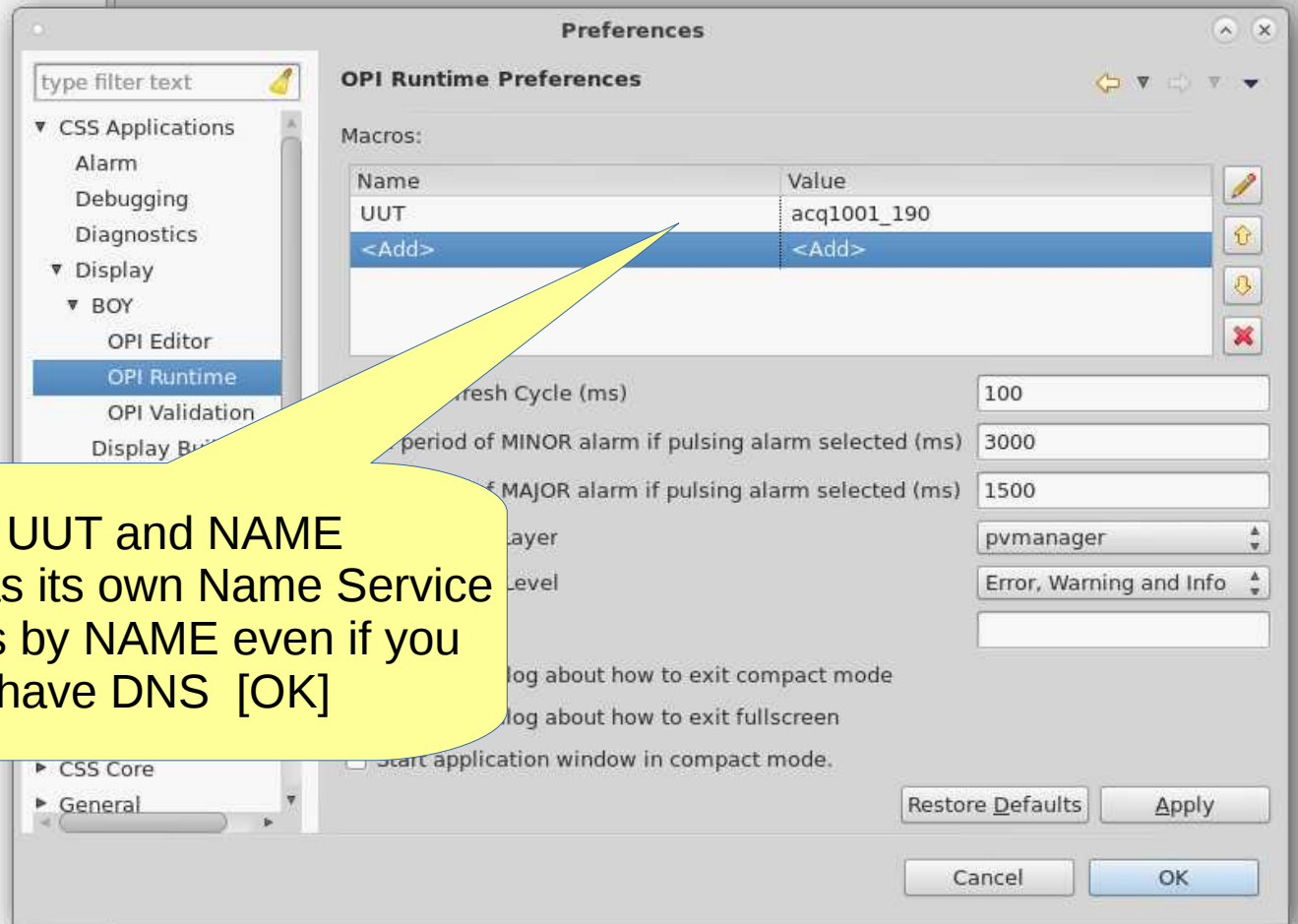
(4) Browse to Project Location
Set Project Name [FINISH]



Set UUT Name

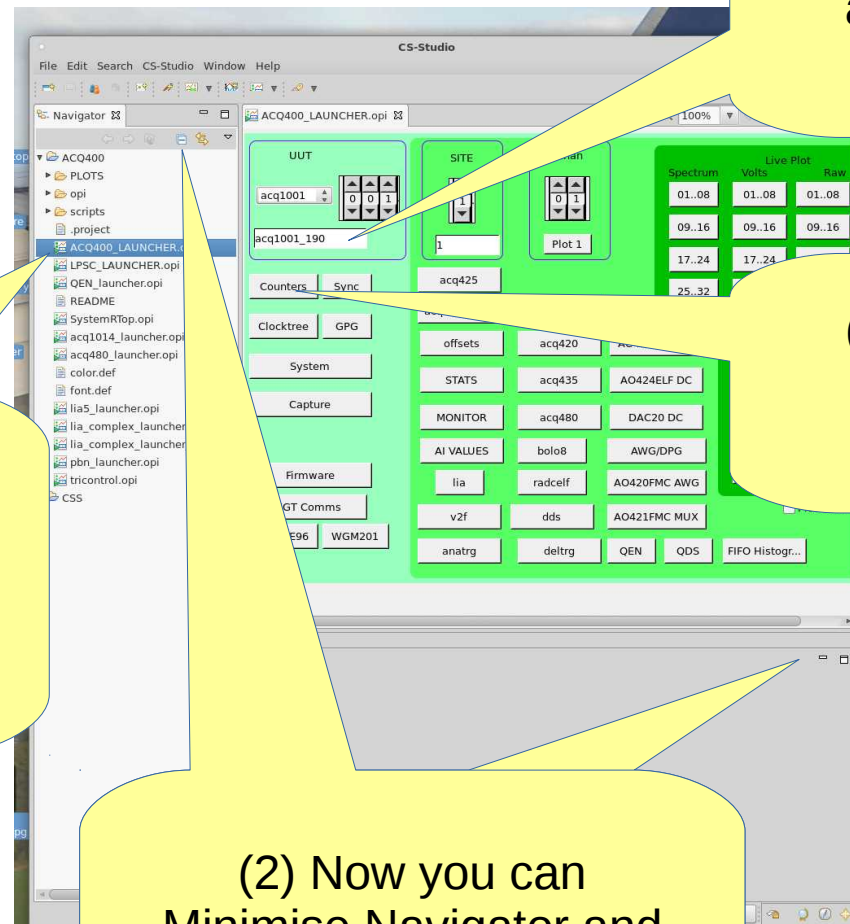


(1) Edit | Preferences



(2) Set UUT and NAME
NB: EPICS has its own Name Service
so this works by NAME even if you
do not have DNS [OK]

Run the LAUNCHER



(1) From Navigator, select
ACQ400_LAUNCHER.opi
Right-Click,
Open With | Opi Display

(2) Now you can
Minimise Navigator and
any other windows to
save space

(3) UUT selected
automatically, or you
can dial it up

(4) Press a button eg
[COUNTERS] to
get an OPI

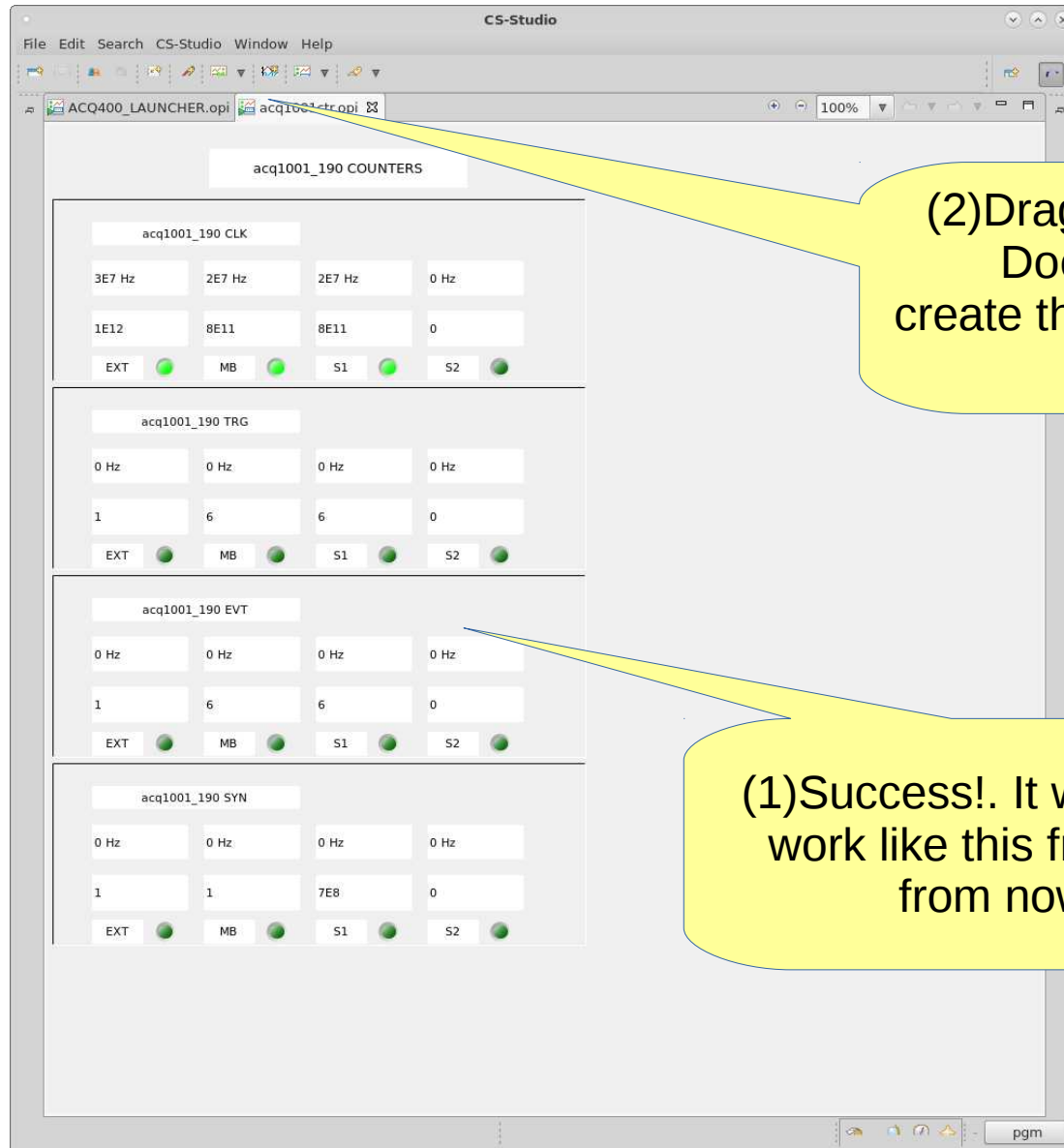
Barbie Pink → OPI FAIL

The screenshot shows the CS-Studio application window. The main panel displays four sections: 'acq1001_190 COUNTERS', 'acq1001_190 TRG', 'acq1001_190 EVT', and 'acq1001_190 SYN'. Each section contains a grid of status indicators, many of which are pink and labeled 'Disconnected'. A yellow speech bubble points to these indicators with the text: (1) EPICS connection fail we can fix this. First: try disabling firewall. if still no good ..

On the right, the 'Channel Access' preferences dialog is open. The 'Address List' field contains '10.12.197.33'. A yellow speech bubble points to this field with the text: (2) Set ip address of UUT in Address List. Uncheck Auto Address List [OK] and restart cs-studio. The 'Auto Address List' checkbox is checked. Other settings include 'Mode: CAJ (Pure Java)', 'Connection Timeout [s]: 30.0', 'Beam Period [s]: 15.0', 'Server Port: 5064', 'Repeater Port: 5065', 'Max Array Size [bytes]: 100000000', 'Monitor Mask: Value', and 'Variable Length Array: Auto Detect'.

The 'Channel Access' preferences dialog has buttons for 'Restore Defaults', 'Apply', 'Cancel', and 'OK'.

Working OPI



(2) Drag OPI's from TABs
Dock E/W N/S to
create the screen you need
eg ..

(1) Success!. It will always
work like this from start
from now..

Streaming Data

The image displays two software interfaces used for data acquisition and analysis. The top interface, **ACQ400_LAUNCHER.opi**, is a configuration tool with sections for **UUT** (Unit Under Test), **SITE**, and **Chan**. It includes a **Live Plot** table showing frequency ranges and voltage levels. The bottom interface, **CS-Studio**, shows the **Capture acq1001_190 Stream Control** window, which includes a **STOP** button, **sample_count** (269129967), **Scope Mode** (free-run), and **Rate** (1). A yellow callout points to the **Capture** button in the ACQ400 Launcher, stating: (1) [CAPTURE] Press to Start UUT ships with sensible defaults. Another yellow callout points to the **Live Plot** table in the ACQ400 Launcher, stating: (2) Live Waveforms. The CS-Studio window also displays a **Legend** and a **Waveform** plot showing a sine wave with a peak voltage of 9.86V and a sample count of 16065.

ACQ400_LAUNCHER.opi

UUT

acq1001

acq1001_190

Counters

Sync

Clocktree

GPG

System

Capture

SITE

1

acq425

acq425 gains

acq420 p

offsets

acq420

STATS

acq435

MONITOR

acq480

Chan

Plot 1

Live Plot

Spectrum	Volts	Raw
01..08	01..08	01..08
09..16	09..16	09..16
17..24	17..24	17..24
25..32	25..32	25..32

CS-Studio

File Edit Search CS-Studio Window Help

ACQ400_LAUNCHER.opi acq1001ctr.opi capture.opi

Transient Stream Stats

Capture acq1001_190 Stream Control

STOP 23.8MiB 0:00:18 [1.32MiB/s]

sample_count 269129967 43407 Hz

Scope Mode free-run Rate 1

TRG enable d1 rising USE SOFT TRG

VENTO disable d0 falling Find Event 0 IDLE

RTM_TRANLEN

acq1001_190:LIVE

Legend Type LONG 16065

acq1001_190:1 CH01:08

9.86

8

6

4

2

0

-2

-4

-6

-8

-9.89

0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200

Samples

(1) [CAPTURE]
Press to Start
UUT ships with sensible
defaults.

(2) Live Waveforms