



Code Composer Studio

v5

What is Code Composer Studio?



- **Integrated development environment for TI embedded processors**
 - Includes debugger, compiler, editor, operating system...
 - The IDE is built on the Eclipse open source software framework
 - Extended by TI to support device capabilities
- **CCSv5 is based on “off the shelf” Eclipse**
 - Going forward CCS will use unmodified versions of Eclipse
 - TI contributes changes directly to the open source community
 - Drop in Eclipse plug-ins from other vendors or take TI tools and drop them into an existing Eclipse environment
 - Users can take advantage of all the latest improvements in Eclipse
- **Integrate additional tools**
 - OS application development tools (Linux, Android...)
 - Code analysis, source control...

Code Composer Studio v5

- **CCSv5 is split into two phases**

- 5.0

- Not a replacement for CCSv4
 - Targeted at users who are using devices running Linux & multi-core C6000
 - Addresses a need (Linux debug) that is not supported by CCSv4
 - Available today

- 5.1

- replacement for CCSv4 and is targeted at all users
 - Available fall 2011

- **Supports both Windows & Linux**

- Note that not all emulators will be supported on Linux

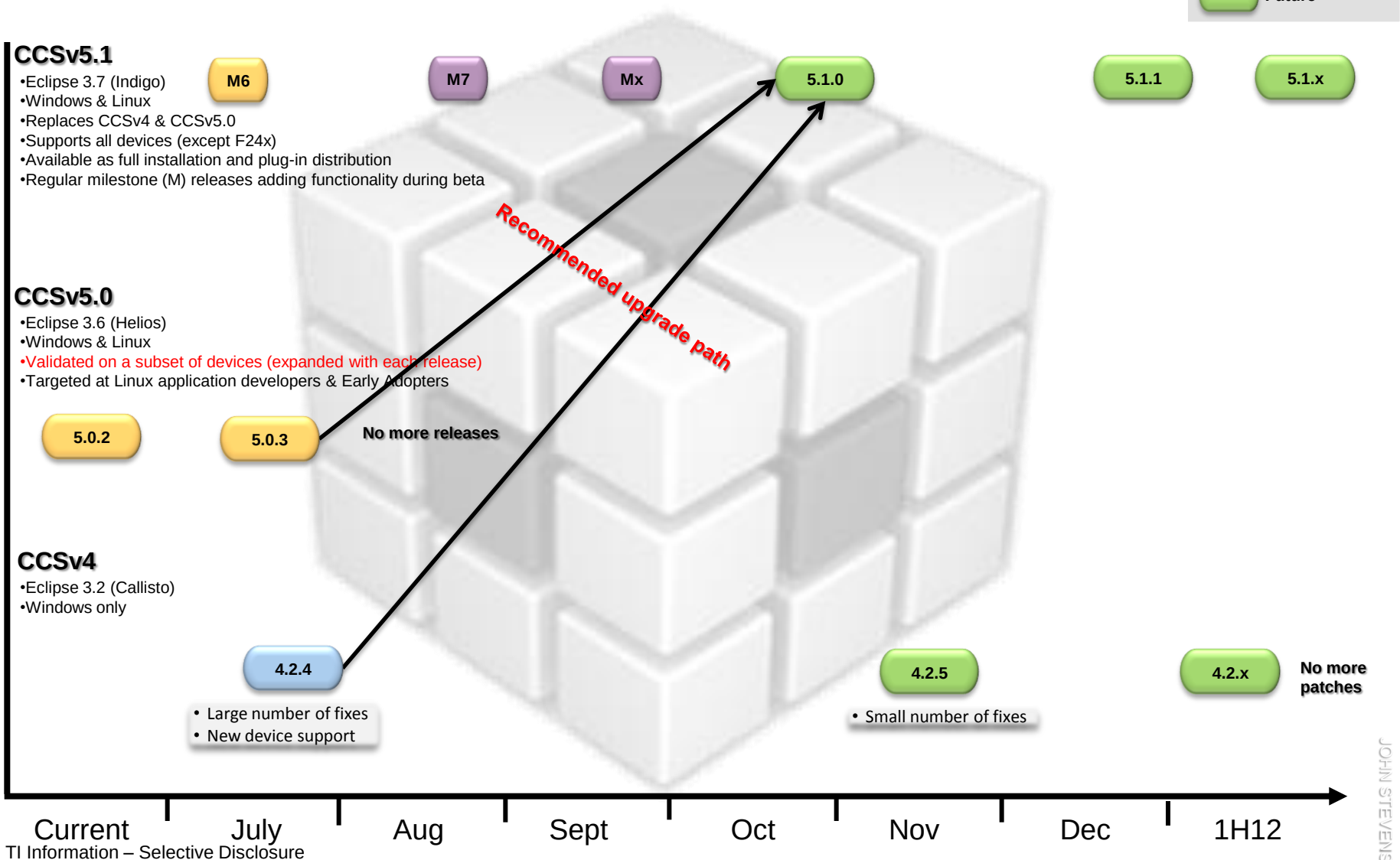
- SD DSK/EVM onboard emulators, XDS560 PCI are not supported

- Most USB/LAN emulators will be supported

- XDS100, SD 510USB/USB+, 560v2, BH 560m/bp/lan

- http://processors.wiki.ti.com/index.php/Linux_Host_Support

Code Composer Studio Roadmap



Current | July | Aug | Sept | Oct | Nov | Dec | 1H12

TI Information – Selective Disclosure

Improvements for CCSv5.1

What's new in Eclipse?

- **A lot!**

- CCSv5.1 uses Eclipse 3.7, CCSv4 uses Eclipse 3.2
- 5 years of fixes & enhancements

- **Key items**

- Editor/Indexer improvements
 - Most common area of Eclipse related problems in CCSv4
 - Much faster
 - Much more reliable
- Drag & drop support
- Support for using macros when linking files (portable projects)
- Dynamic syntax checking
- Search for plug-ins from inside Eclipse

- **http://processors.wiki.ti.com/index.php/CCSv5_Changes**

Customer Feedback on CCSv4



- **Needs to be Smaller**

- The CCS DVD image is huge (>1GB to download, >4GB on disk)
- Need to download a lot of things that you do not need

- **Needs to be Faster**

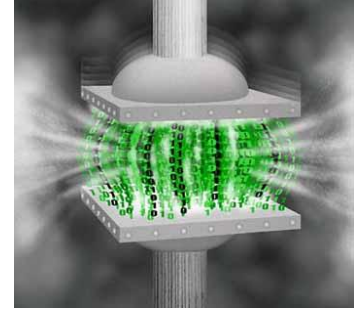
- Product is slow
- Startup times and debugger responsiveness needs to be improved

- **Needs to be Easier**

- The user interface is too cluttered
- Difficult to figure out how to get started

- **Thus the objective for 5.1 is to make CCS “Small, Fast & Easy”**

Small



- **Today**

- Download size is 1.2GB
- Separate code size limited and DVD images (users often download the wrong one)
- Users have to download much more than they need

- **CCSv5.1 will use a dynamic download**

- User downloads a small initial installation package
- Based on user selections the appropriate packages will be downloaded and installed dynamically
- User can add more features later
- Optionally users can download the complete DVD image

Fast

- **Speed up common tasks**

- Starting up CCS
- Launching a debug session
- Creating a new project (initial experience needs to be awesome)

- **Responsiveness**

- While using the product CCS needs to be responsive
 - Stepping (with views open)
 - Continuous refresh in real-time mode with expressions view and graphs open
 - Saving target configurations
 - Loading/Flashing programs



Easy – User Interface Modes



- **Simple Mode**

- By default CCS will open in simple/basic mode
- Simplified user interface with far fewer menu items, toolbar buttons
- TI supplied Edit and Debug Perspectives
- Simplified build options

- **Advanced Mode**

- Use default Eclipse perspectives
- Very similar to what exists in CCSv4
- Recommended for users who will be integrating other Eclipse based tools into CCS

- **Possible to switch Modes**

- Users may decide that they are ready to move from simple to advanced mode or vice versa

Easy– Common tasks



- **Creating New Projects**

- Must be very simple to create a new project for a device using a template

- **Build options**

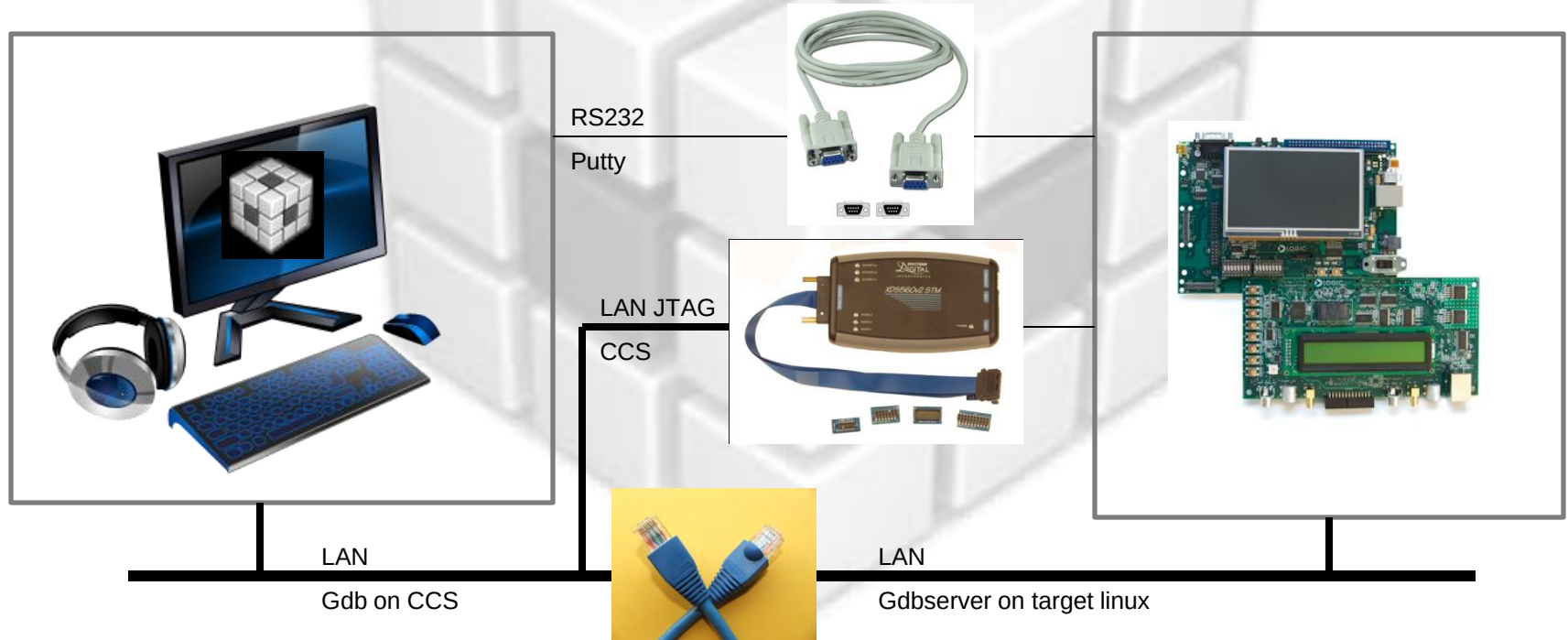
- Many users have difficulty using the build options dialog and find it overwhelming
- Updates to options need to be delivered via compiler releases and not dependent on CCS updates

- **Sharing projects**

- Need to make it easier for users to share projects, including working with version control (portable projects)
- Setting up linked resources needs to be simplified

Linux Development

- CCS supports both Windows and Linux host PCs
- Linux application debug supported via integrated GDB
- Linux kernel debug supported via JTAG debug



Upgrading to CCSv5

- **CCSv5.0**

- Bundled with new Linux SDKs
- Can be downloaded
 - [http://processors.wiki.ti.com/index.php/Category:Code Composer Studio v5](http://processors.wiki.ti.com/index.php/Category:Code_Composer_Studio_v5)
- Works with a CCSv4 license

- **CCSv5.1**

- Replaces CCSv4
- Requires a CCSv5 license
 - Users with active subscription will receive CCSv5.1 for free
 - Users with expired subscription can renew it to receive the upgrade
- During alpha & beta you can use a CCSv4 license

Migration

- **Moving from CCSv3 to CCSv4 was hard**
 - Completely different environment
 - New project system
 - Target configuration changes
 - The CCS world changed...
- **CCSv4 to CCSv5.1 migration will be much smoother**
 - Environment will be very similar
 - Project system is the same (simple import)
 - Target configuration is the same
- **CCSv3 to CCSv5.1 migration**
 - The team continues to make improvements to the v3 import wizard
 - UI simplifications will help with the learning curve
 - Improved documentation will help people get up to speed

Conclusion

- **Small, Fast & Easy**

- The initial experience with CCSv5.1 will determine if the release is successful
 - Needs to be easy to get, install and start using
 - Needs to comprehend users migrating from CCSv4, CCSv3 and other tools, needs to be easy for all

- **We need help from you to make this a great product**

- Try the milestone releases
- Provide feedback