First European LLVM Developers’ Conference

London, 12\textsuperscript{th}-13\textsuperscript{th} April 2012
Opening remarks by Lee Smith, ARM Fellow and Director of Technology, System Design Division
The boring (but necessary stuff ...)

In case of emergency (fire, medical, or other incident ...)

- Emergency exits are signed; use the nearest stairs to the street
- The emergency signal is a siren (breeeeeeee!
- The emergency meeting point is outside the main entrance in Russell Square – turn left out of the main entrance towards Barclays Bank
- You can get first aid from the hotel reception
- The UK emergency number is 999 (or 112 from a mobile phone)
  - Fire and rescue services
  - Police
  - Ambulance and paramedical services (all medical emergencies)
- Or, ask any ARM person
Some words of thanks

To ARM for underwriting and organizing this event
  ▪ To the many colleagues without whose enthusiasm...
  ▪ and to the “ARM TV” crew recording the event

To Google and Qualcomm Innovation Center as significant sponsors of this event

To the programme committee who selected papers...
  ▪ Anton Korobeynikov, Chandler Carruth, Chris Lattner, David Kipping, Duncan Sands, (James Molloy, Lee Smith)

To Chris and Tanya Lattner at Apple, David Kipping at Qualcomm and Chandler Carruth at Google
  ▪ For encouragement and practical advice

To you for being here, determined to make the event succeed
What drives interest in LLVM?

**ARM is interested because its customers are interested; they are interested by diverse factors including**

- A modern, open source code base, much easier to work on than the GCC code base
- OpenCL
- Code generation for proprietary DSP cores
- Absence of GCC-like legacy commitments makes the community less constrained (for now...) than the GCC community
- JIT code generation
- Compared with GCC, Clang provides an easier-to-use framework for building both ad hoc analysis tools and domain-specific languages
- Non-viral licence
LLVM weaknesses we can address

The community’s strength and vibrancy in technical diversity is/causes a weakness in focus

- **Challenge**: How to get significantly better focus on key issues without significantly reducing diversity or becoming obstructive...
- **Challenge**: How to ensure that the many worthy developments we see *do* get subsumed into the mainline...
- **Challenge**: How to accelerate academic/research adoption in the face of an incumbent gcc, SUIF, Open64...

**LLVM is currently unsuited to lightweight JIT... More AoT... 😊**

- **Challenge**: How to drop the pretence or make it work!

**Not a strong enough community around llvm-arm ...**

- ARM and x86 are arguably the most important CPU targets
What next?

Create a *broadly sponsored, independent, annual conference within 3 years (stretch goal: 2014 conference)*

- Please tell one of this year’s organizers* if you have previous experience of doing this and would be willing to help us

Additionally, we need **you to**

- Participate with enthusiasm
- Encourage your employers to pledge sponsorship – tell them how worthwhile the conference is!
- Consider whether you could help to organize Euro LLVM 2013 and whether your employer could underwrite it
  - Tell one of this year’s organizers if you think you can*...

* By E-mail: [Euro-llvm@arm.com](mailto:Euro-llvm@arm.com), [chandlerc@google.com](mailto:chandlerc@google.com), [dkipping@qualcomm.com](mailto:dkipping@qualcomm.com)
How you can help Euro-LLVM 2013 to succeed

- Fill in our questionnaire about Euro LLVM 2012!
  - And hand it to any ARM person before you leave
    (You should at least recognize me and Alice from registration!)

- Make your preferences clear to any of the organizers before you leave
  - If you don’t know who we are, ask any ARM person!
Thank you for listening!

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