



MLIR Tutorial

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```
object to mirror
mirror_mod.mirror_object =
operation = "MIRROR_X":
mirror_mod.use_x = True
mirror_mod.use_y = False
mirror_mod.use_z = False
operation = "MIRROR_Y":
mirror_mod.use_x = False
mirror_mod.use_y = True
mirror_mod.use_z = False
operation = "MIRROR_Z":
mirror_mod.use_x = False
mirror_mod.use_y = False
mirror_mod.use_z = True

selection at the end
ob.select = 1
for ob.select-1
for one.objects.active
one.name = "d" + str(modifier)
mirror_ob.select = 0
= bpy.context.selected_objects
data.objects[one.name].select
print("please select exactly one")

--- OPERATOR CLASSES ---

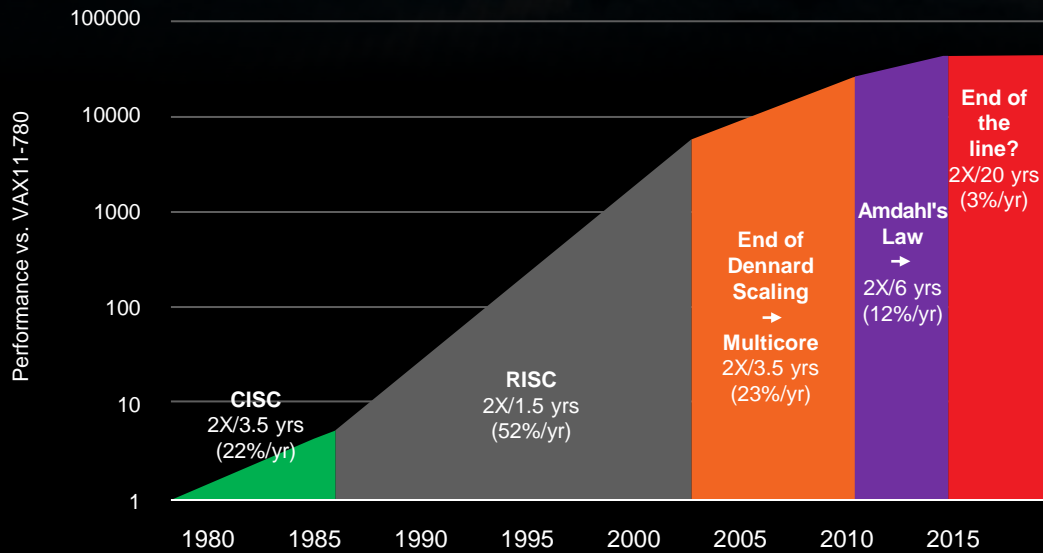
types.Operator):
X mirror to the selected
object.mirror_mirror_x"
mirror X"

):
object is not
```

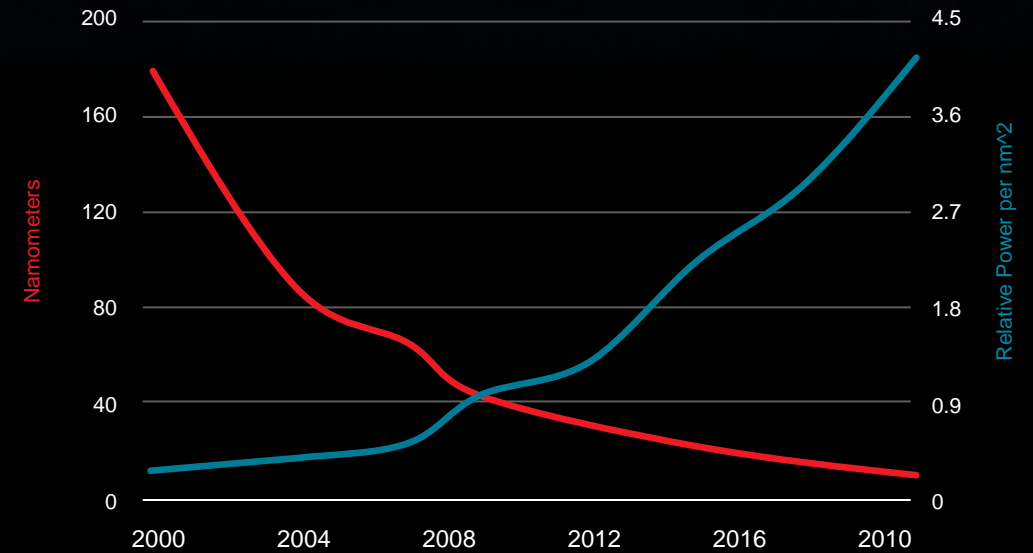
Context

End of Growth of Single Program Speed?

40 years of Processor Performance



Technology & Power: Dennard Scaling



A New Golden Age for
Computer Architecture



A New Golden Age for
Compilers

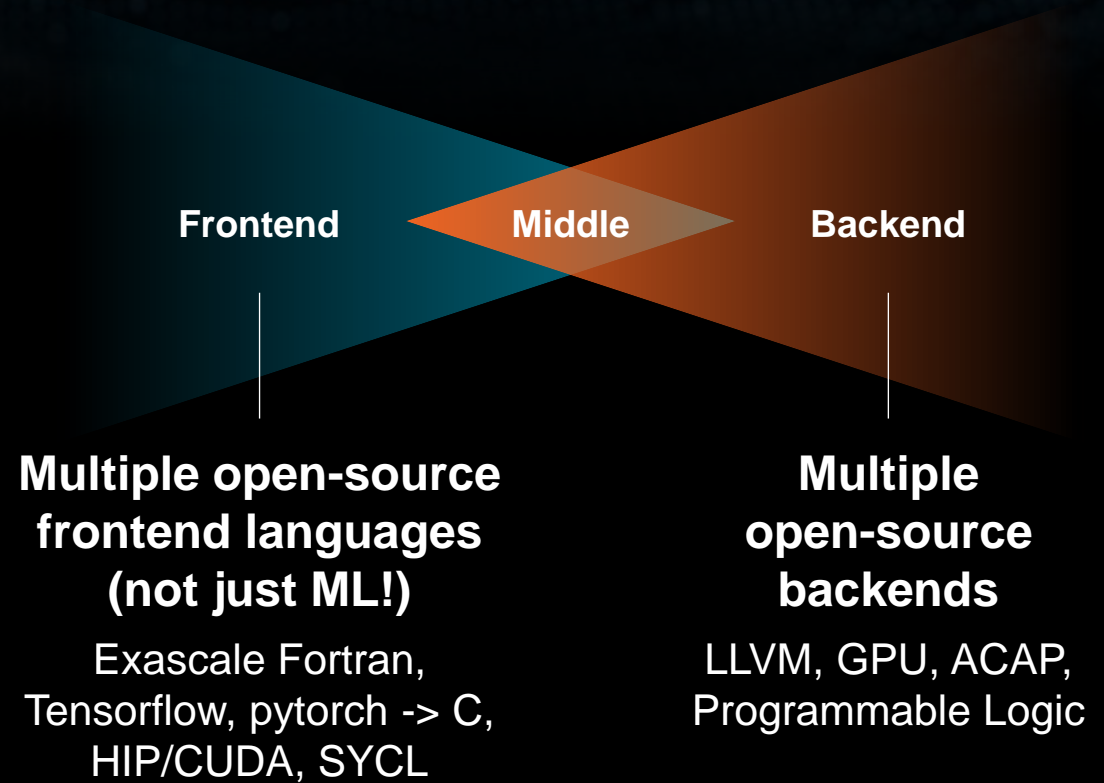
MLIR: Multi-Level Intermediate Representation



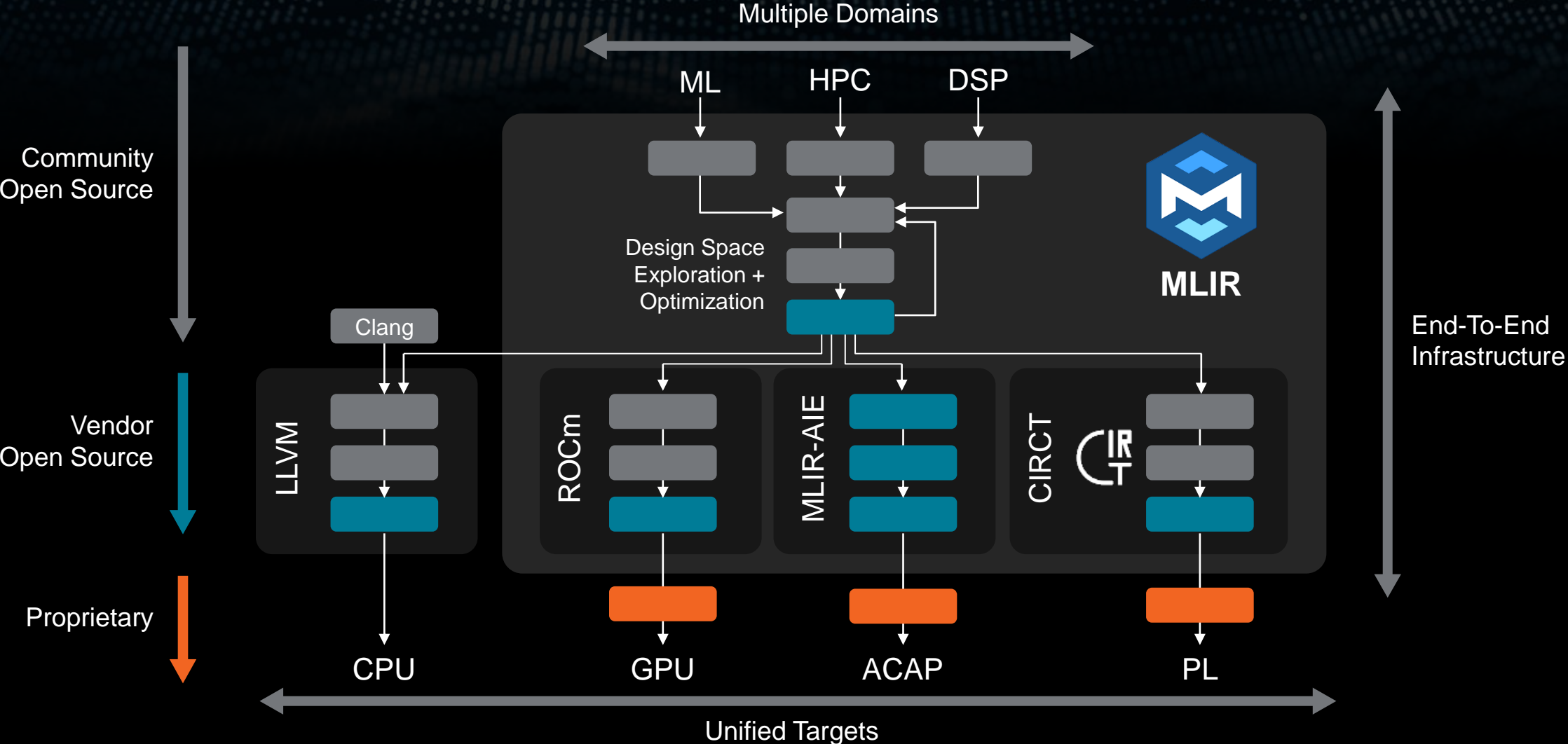
Next generation open source compiler infrastructure

- LLVM core project

Well positioned to support this new golden age!



Future Heterogeneous Programming



Agenda

MLIR Basics	Jacques Pienaar (Google)
CPU and GPU Code Generation	Harsh Menon (Nod.AI)
<i>Break</i>	
ML Frontends and TOSA	Suraj Sudhir (ARM)
Hardware Design and CIRCT	Andrew Lenhart (SiFive) and John Demme (Microsoft)

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