

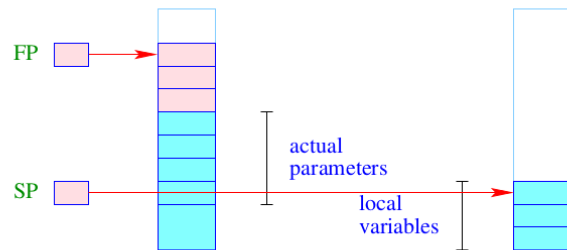
Script generated by TTT

Title: Seidl: Virtual_Machines (07.07.2015)

Date: Tue Jul 07 10:20:43 CEST 2015

Duration: 18:05 min

Pages: 9



Inparticular, the **local** variables reside in the new block ...

⇒ We address ...

- the formal parameters **relatively** to the frame-pointer;
- the local variables **relatively** to the stack-pointer :-)

⇒ We must re-organize the complete code generation ... :-)

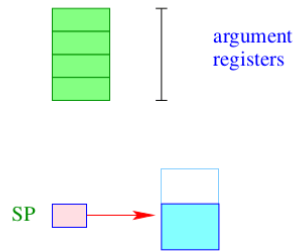
Alternative: Passing of parameters in registers ... :-)

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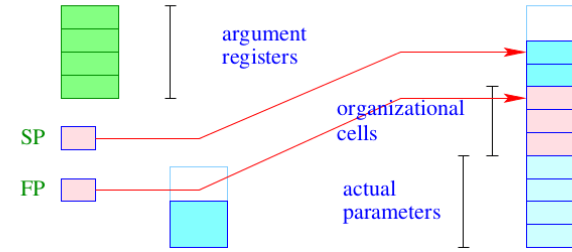
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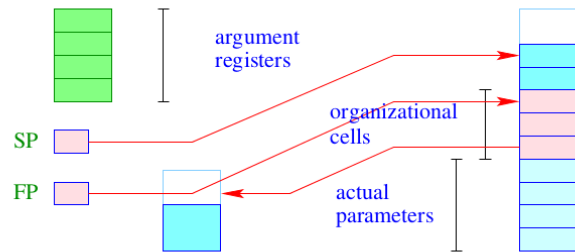
The values of the actual parameters are determined **before** allocation of the new stack frame.

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The **complete** frame is allocated inside the new block – plus the space for the current parameters.

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Inside the new block, though, we must store the old **SP** (possibly +1) in order to correctly return the result ... :-)

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3. Idea: Hybrid Solution

- For the first k threads, we allocate a separate stack area.
- For all further threads, we successively use one of the existing ones !!!



- For few threads extremely **simple** and **efficient**;
- For many threads **amortized** storage usage :-))

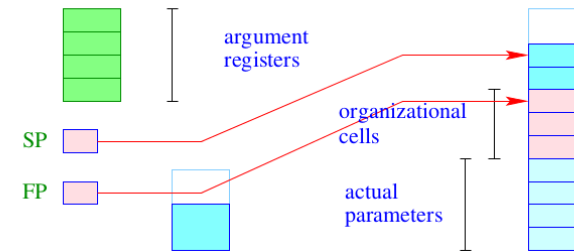
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