



Aggregation & Analysis of IPv6 Prefixes at Internet-Scale

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SE 180.777 Seminar for Master Students in SE & IC
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~# **Motivation**

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Surveying the internet

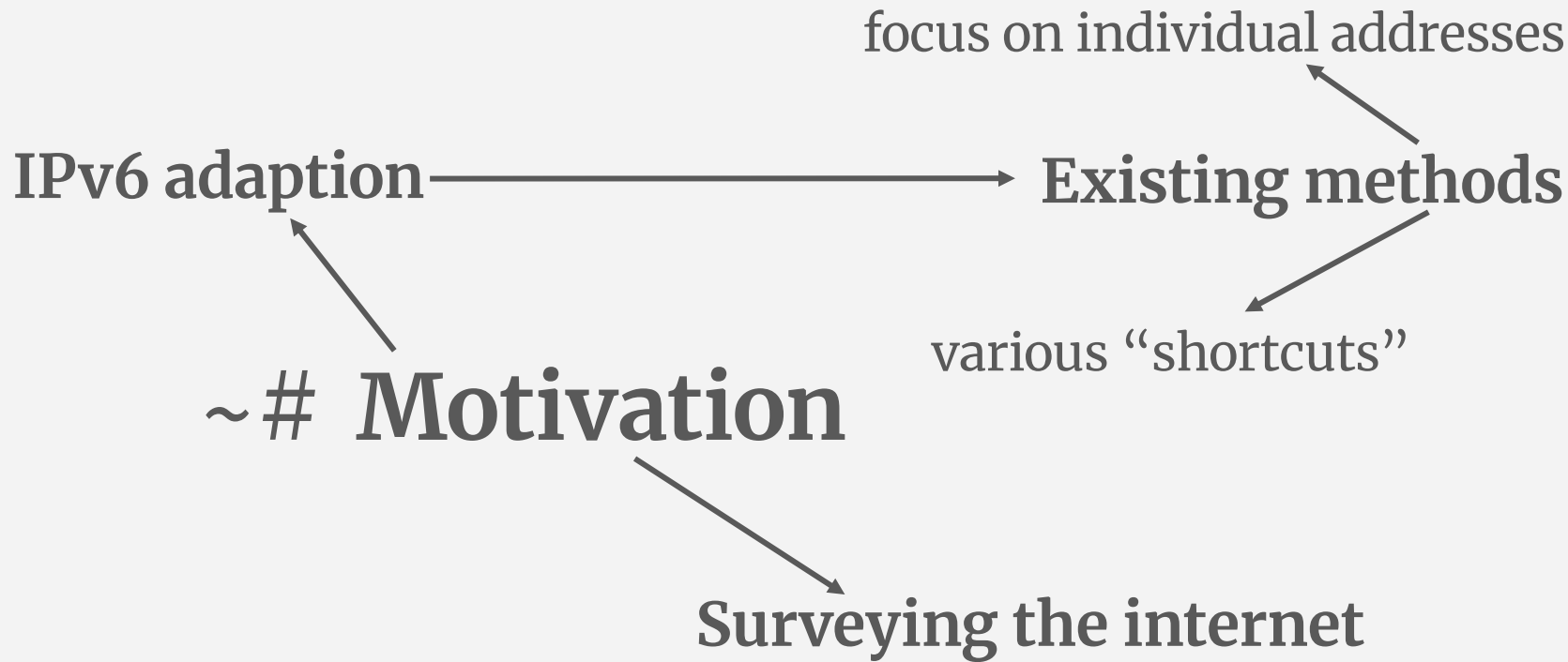
scan entire IPv4 in ~1h

decentralisation, variation

IPv6 adaption

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Surveying the internet

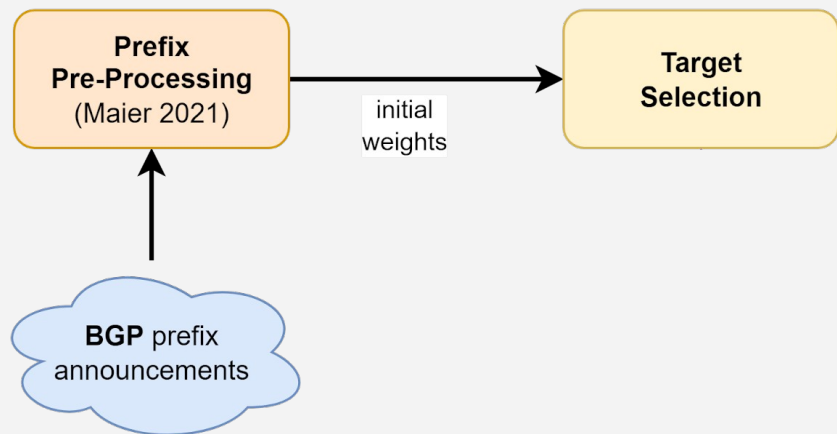


~# How can we do better?

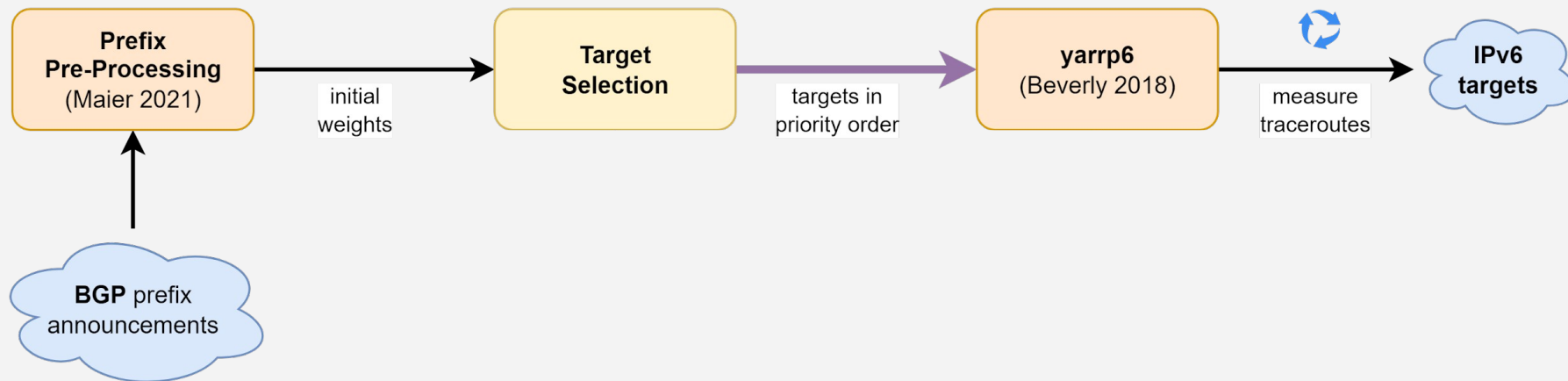
~\$ How can we do better?

- ◆ entire BGP IPv6 internet as search space
- ◆ operation on **prefix** level
- ◆ **feedback** of past measurements

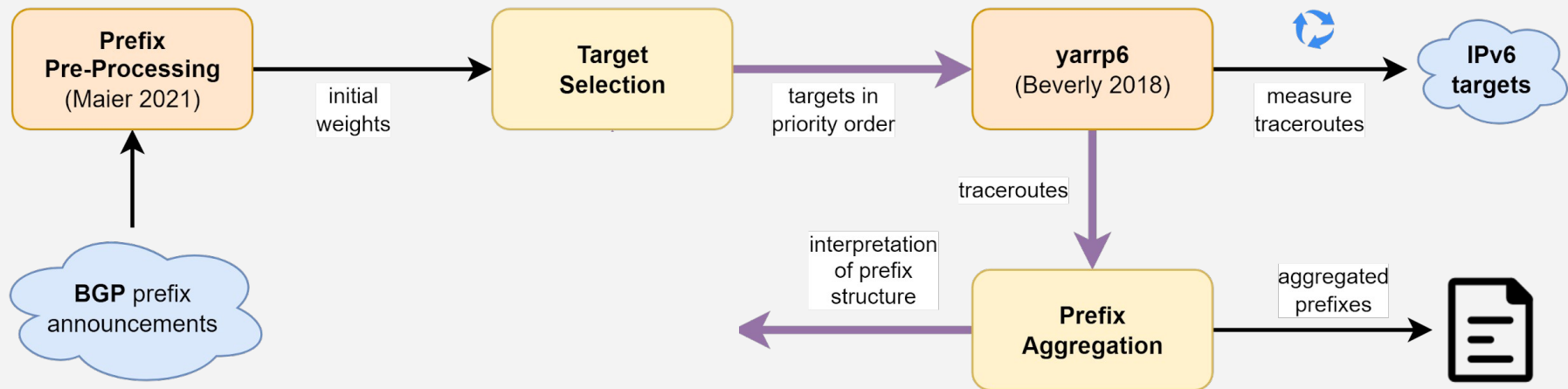
~\$ Measurement Setup



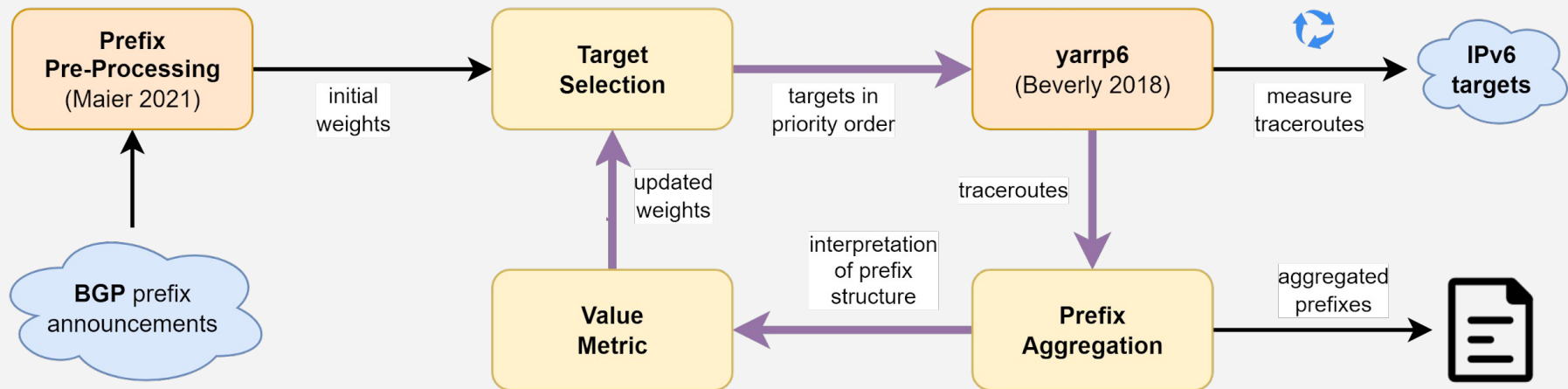
~\$ Measurement Setup



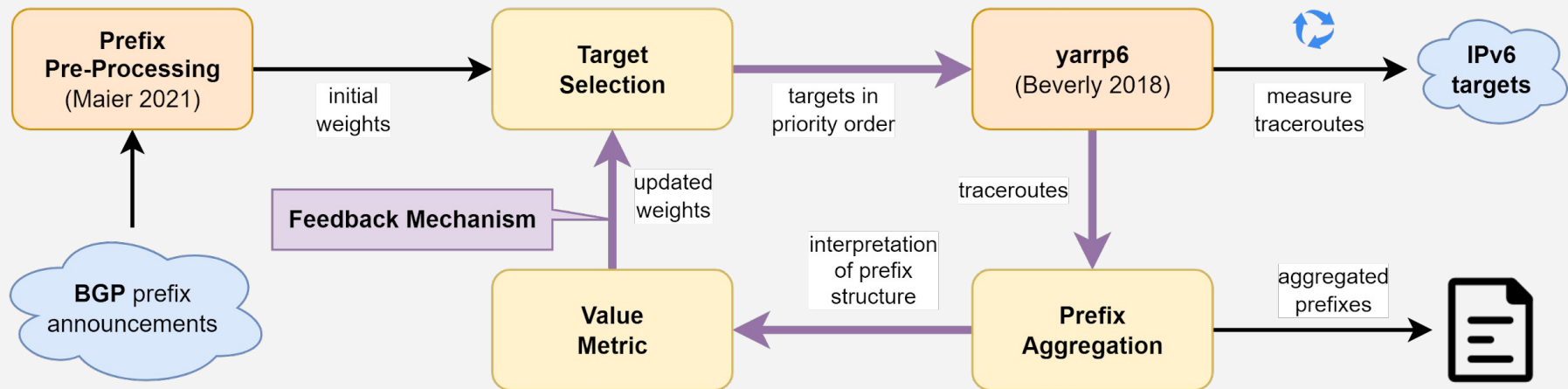
~\$ Measurement Setup



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~\$ Measurement Setup



~\$ Scientific Method

- ◆ Literature Review → Measurement Setup
- ◆ Experiment → Qualitative & Quantitative **Evaluation**
 - > results of similar works
 - > previous measurement rounds
 - > other ground truth data ?

~\$ Goals

◆ Develop/Enhance methods:

- > prefix aggregation
- > value metric
- > feedback loop

◆ Evaluate their effectiveness

~# What questions are there?

proposal text with full citations:

