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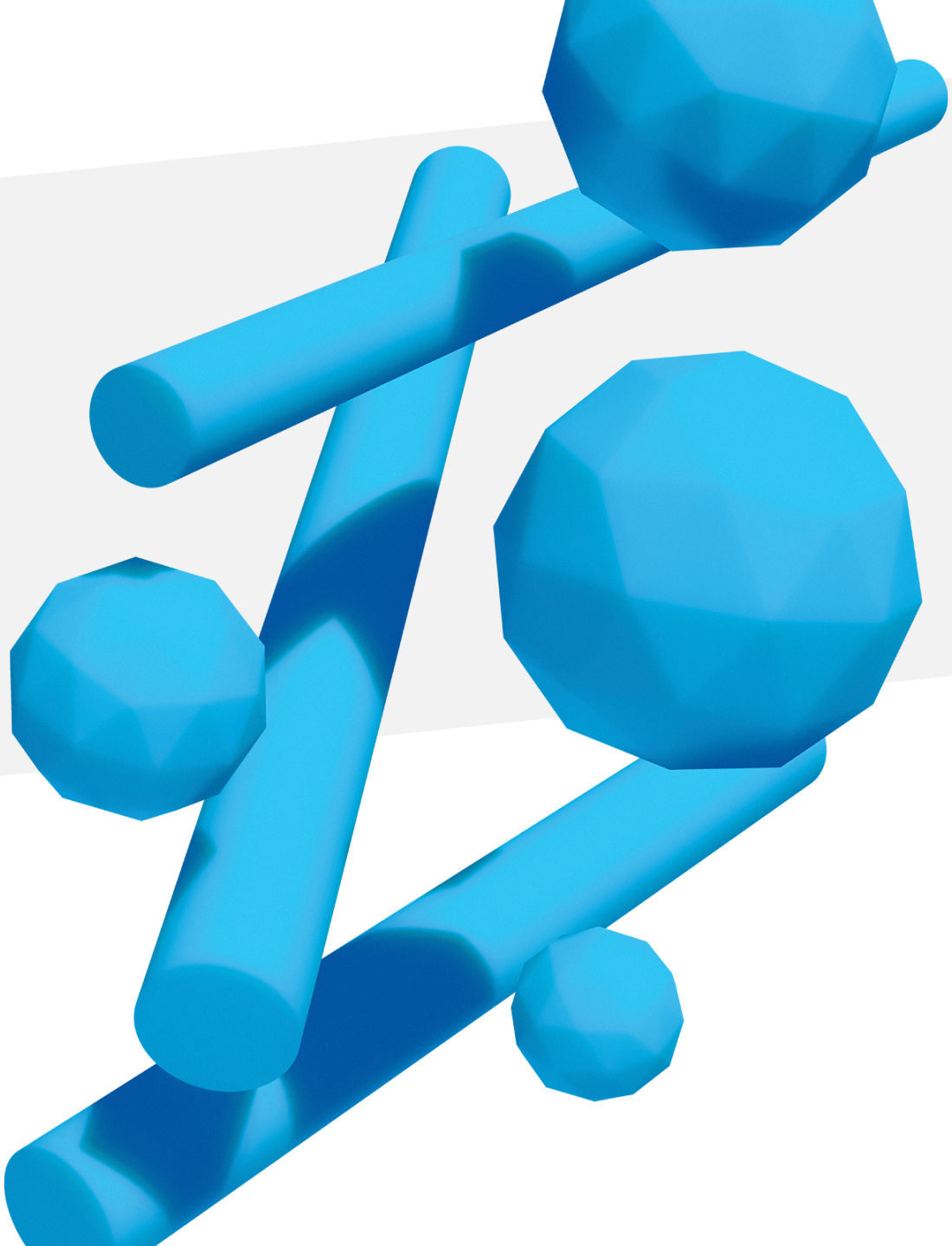
UnicodeString Implementations



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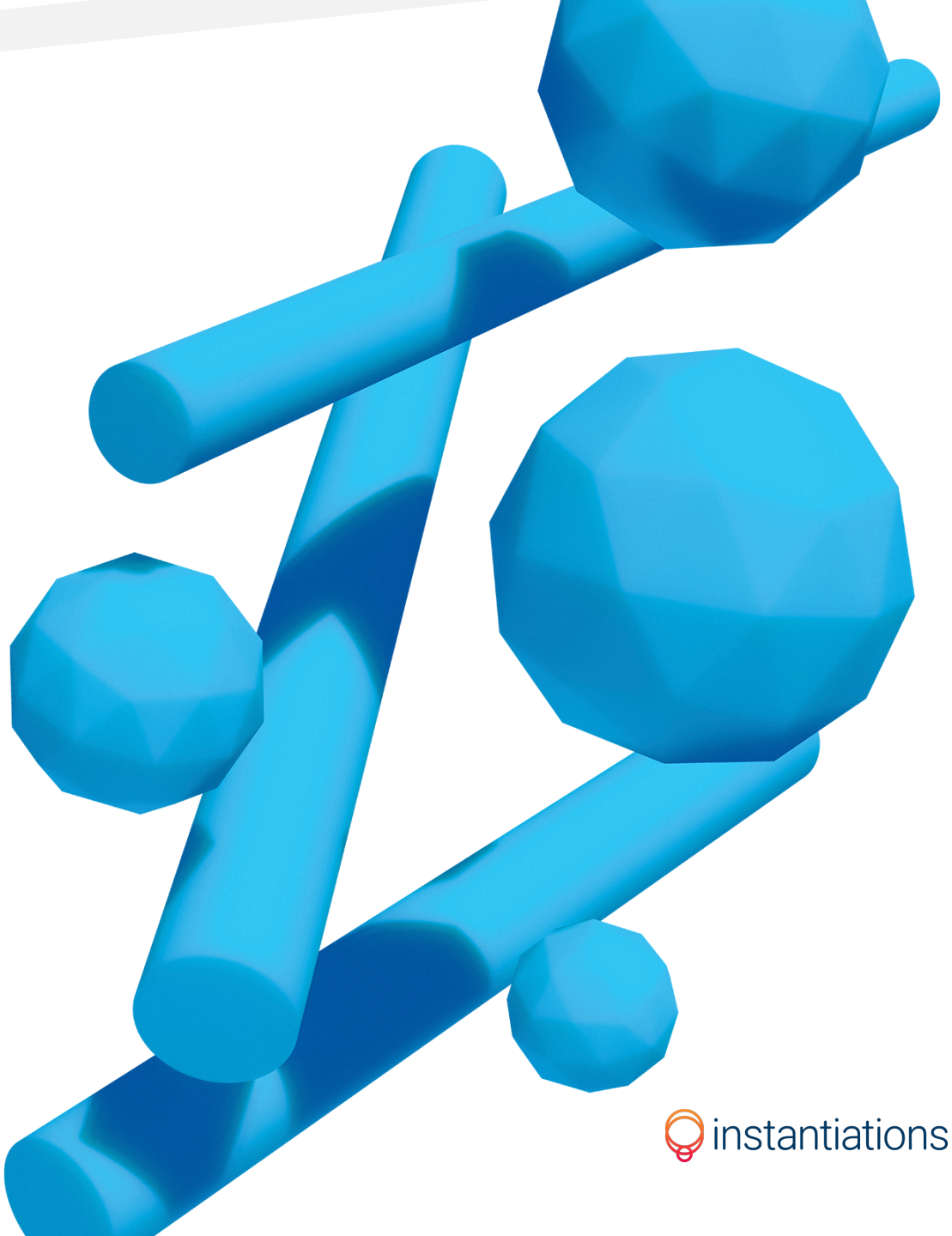
Topics

- Unicode
- Implementations Overview
- Implementation Details



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Unicode

- Character set
- Encoding
- Normalization
- Equality
- And more!

UnicodeString Overview

Dialect	Encoding	Base unit	Built on	Bytestring
Pharo	UTF-32	Codepoint	Squeak v3	Latin 1
Cuis	UTF-8	Codepoint	svenvc/ UTF8String	Latin 9
VAST	UTF-8	Grapheme	Rust / Swift	System locale

Equality

- Precomposed vs combining marks
- Multiple combining marks

- Normalized forms
- Case-insensitivity

Hashing

- Consistent with equality
- Consistent with single-byte strings

UnicodeString hash	Ascii	Byte	Unicode
Pharo	stringHash:	stringHash:	stringHash:
Cuis	primitiveStringHash + skip optimisation	Convert to byteString Then same as ascii	primitiveStringHash + skip optimisation
VAST	StringHash primitive	Convert to EsString Then same as ascii	seahash

Rendering

- Pharo - FreeType2 library + embedded fonts
- Cuis – VectorCanvas + freetype parser + bundled fonts
- VAST - System rendering

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Questions?

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