DX-102-11

### Datasheet

## TX-02 Berkeley Mono<sup>™</sup> Typeface

**U.S. Graphics Company** 

#### **Document Information**

TX-02 Berkeley Mono<sup>™</sup> Datasheet

Document ID DX-102-11

December, 2024

#### Introduction

TX-02 Berkeley Mono<sup>™</sup> is a love letter to the golden era of computing. The era that gave rise to a generation of people that celebrated automation and reveled in the joy of computing, when transistors replaced cogs, and machinereadable typefaces were developed, for when humans and machines truly interfaced on an unprecedented scale.

Berkeley Mono<sup>™</sup> wears a \*NIX T-shirt and aspires to be etched on control panels in black synthetic lacquer. It is Adrian Frutiger visits Bell Labs, it is Gene Kranz's command. It operates with calibrated precision and has a datasheet.

Berkeley Mono<sup>™</sup> is a typeface for professionals.

**Marketing Poster** 

# TX-02 BERKELEY MONO™ TYPEFACE



#### **Typeface Specification**

Family Name	TX-02
Family Name (Variable)	TX-02 Variable
Units per Em	1000
Version	2.000
Designer	Neil Panchal
Designer URL	https://neil.computer
Manufacturer	U.S. Graphics, LLC
Manufacturer URL	https://usgraphics.com
Copyright	© Copyright 2024, U.S. Graphcis, LLC. All Rights Reserved.
License	Proprietary and non-transferrable. See License URL for full details.
License URL	https://usgraphics.com/legal/license
Description	A love letter to the golden era of computing.
Variable axes	Weight (wght)
Typo metrics	Yes
Fixed Pitch	Yes
fsType embedding	Installable
Subsetting	Allowed
Unicode ranges	Basic Latin, Latin-1 Supplement, Latin Extended-A, Latin Extended-B
Width Cuts	UltraCondensed, ExtraCondensed, Condensed, SemiCondensed, Normal
Weight Cuts	Thin, ExtraLight, Light, SemiLight, Retina, Regular, Book, Medium, SemiBold, Bold, ExtraBold, Black
Slant Cuts	Upright, Oblique
Variable Axes	Width (wdth) axis, Weight (wght) axis, Slant (slnt) axis
Desktop Formats	OTF, TTF
Web Formats	W0FF2
Variable Formats	OTF, TTF, WOFF2

72	ENGINEERING
60	ENGINEERING
48	ENGINEERING
42	ENGINEERING
36	ENGINEERING
30	ENGINEERING
27	ENGINEERING
24	ENGINEERING
20	ENGINEERING
18	ENGINEERING
16	ENGINEERING
14	ENGINEERING
12 10	ENGINEERING
IU	ENGINEERING

72	ENGINEERING
60	ENGINEERING
48	ENGINEERING
42	ENGINEERING
36	ENGINEERING
30	ENGINEERING
27	ENGINEERING
24	ENGINEERING
20	ENGINEERING
18	ENGINEERING
16	ENGINEERING
14	ENGINEERING
12 10	ENGINEERING

72	ENGINEERING
60	ENGINEERING
48	ENGINEERING
42	ENGINEERING
36	ENGINEERING
30	ENGINEERING
27	ENGINEERING
24	ENGINEERING
20	ENGINEERING
18	ENGINEERING
16	ENGINEERING
14	ENGINEERING
12 10	
10	ENGINEEKING

72	ENGINEERING
60	ENGINEERING
48	ENGINEERING
42	ENGINEERING
36	ENGINEERING
30	ENGINEERING
27	ENGINEERING
24	ENGINEERING
20	ENGINEERING
18	ENGINEERING
16	ENGINEERING
14	ENGINEERING
12 10	ENGINEERING

#### Uppercase

Α	В	С	D	Ε	F	G	Η	Ι	J	Κ	L	Μ	Ν	0	Ρ
0041	0042	0043	0044	0045	0046	0047	0048	0049	004A	004B	004C	004D	004E	004F	0050
Q	R	S	Τ	U	V	W	Х	Y	Ζ						
0051	0052	0053	0054	0055	0056	0057	0058	0059	005A						

#### Lowercase

<b>a</b>	<b>b</b>	<b>C</b>	0064	<b>e</b>	<b>f</b>	<b>O</b> 0067	<b>h</b>	0069	<b>J</b> 006A	<b>k</b>	<b>]</b> 006C	<b>m</b> 006D	<b>N</b> 006E	<b>O</b> 006F	<b>P</b>
q	r	S	t	U	V	W	X	У	Ζ						
0071	0072	0073	0074	0075	0076	0077	0078	0079	007A						

#### Numerals

0	1	2	3	4	5	6	7	8	9			
0030	0031	0032	0033	0034	0035	0036	0037	0038	0039			

#### Computer programming symbols

۵	ļ	#	\$	%	&	?	•	^	-	,	١	11	•	;	
0040	0021	0023	0024	0025	0026	003F	0060	005E	002E	002C	0027	0022	003A	003B	007C
(	)	Γ	]	{	}	<	>		/	╋		*	~		
0028	0029	005B	005D	007B	007D	003C	003E	005C	002F	002B	003D	002A	007E	005F	002D

Uppercase (Accented)

Á	Ă	Â	Ä	À	Ā	A	Å	Ã	Æ	Ć	Č	Ç	Ċ	Ð	Ð
00C1	0102	00C2	00C4	00C0	0100	0104	00C5	00C3	00C6	0106	010C	<b>5</b> 00C7	010A	00D0	0110
V		V													
Ď	É	É	Ê	Ê	Ē	È	E	Ę	Ð	Ğ	Ģ	Ġ	Ħ	IJ	Í
010E	00C9	011A	00CA	00CB	0116	00C8	0112	0118	018F	011E	0122	0120	0126	0132	00CD
Î	Ϊ	İ	Ì	Ī	Į	Ķ	Ĺ	Ľ	Ļ	Ł	Ń	Ň	Ņ	Ñ	Ó
00CE	00CF	0130	00CC	012A	012E	0136	0139	013D	013B	0141	0143	0147	0145	00D1	00D3
Ô	Ö	Ò	Ő	Ō	Ø	Õ	Œ	Þ	Ŕ	Ř	Ŗ	Ś	Š	Ş	Ş
00D4	00D6	00D2	0150	014C	00D8	00D5	0152	00DE	0154	0158	0156	015A	0160	015E	0218
ß	Ť	Ţ	Ţ	Ú	Û	Ü	Ù	Ű	Ū	Ų	Ů	Ŵ	Ŵ	Ŵ	Ŵ
1E9E	0164	0162	021A	00DA	00D B	00DC	00D9	0170	016A	0172	016E	1E82	0174	1E84	1E80
Ý	<b>Ŷ</b>	<b>Y</b> 0178	<b>Y</b> 1EF2	<b>Ž</b>	<b>Ž</b>	<b>T</b> 017B									

Lowercase (Accented)

á	ă	â	ä	à	ā	а	å	ã	æ	ć	č	С	Ċ	ð	ď
00E1	0103	00E2	00E4	00E0	0101	0105	00E5	00E3	00E6	0107	010D	<b>3</b> 00E7	010B	00F0	010F
Ь	é	ě	ê	ë	ė	è	ē	e	А	ă	ά	ġ	ħ	7	í
0111	00E9	011B	OOEA	OOEB	0117	00E8	0113	0119	0259	011F	0123	0121	0127	0131	00ED
î	ï	ì		ī	-	7	k	í	7'	٦	$\mathbf{l}$	ń	ň	n	ñ
00EE	00EF	OOEC	0133	012B	012F	0237	0137	013A	013E	<b>7</b> 013C	0142	0144	0148	0146	00F1
ń	ô	ö	ò	ő	ō	Ø	õ	m	h	ŕ	ř	r	ć	č	S
00F3	00F4	00F6	00F2	0151	014D	00F8	00F5	0153	00FE	0155	0159	0157	015B	0161	<b>9</b> 015F
C	R	ť	÷	≁	<b>,</b>			ìı	//	-		0	\ <b>\</b> \		
0219	00DF	0165	0163	021B	00FA	00FB	00FC	00F9	0171	016B	<b>U</b> 0173	016F	<b>V V</b> 1E83	<b>V V</b> 0175	<b>V V</b> 1E85
	<i>.</i> ,	$\hat{\mathbf{v}}$		Ň	4	ž									
<b>VV</b> 1E81	<b>Y</b> 00FD	<b>Y</b> 0177	<b>Y</b> 00FF	<b>Y</b> 1EF3	<b>L</b> 017A	<b>0</b> 17E	017C								

#### Accents

••		•	/	//	^	V	V	0					1		
									2		5	C		,	
00A8	02D9	0060	00B4	02DD	02C6	02C7	02D8	02DA	02DC	00AF	00B8	02DB	0312	0326	

#### **Standard Punctuation**

-	,	•	;			ī	?	ż		•	*	#	/		
002E	002C	003A	003B	2026	0021	00A1	003F	00BF	00B7	2022	002A	0023	002F	005C	002D
		_			(	)	{	}	Γ	]	,	,,,	"	//	1
2013	2014	2010	005F	2017	0028	0029	007B	007D	005B	005D	201A	201E	201C	201D	2018
1	~~	<b>&gt;&gt;</b>	<	>		I									
2019	00AB	00BB	2039	203A	0022	0027									

#### Symbols

2030

25CC

25CA

FFFD

G	&	¶	§	C	R	ТМ	0				I	t	‡		¢
0040	0026	00B6	00A7	00A9	00AE	2122	00B0	2032	2033	007C	00A6	2020	2021	212E	00A2
Ø	\$	€	毛	₽	₹	£	¥		+		×		=	≠	>
00A4	0024	20AC	20BA	20BD	20B9	00A3	00A5	2261	002B	2212	00D7	00F7	003D	2260	003E
<	2	$\leq$	<u>+</u>	~	~		^	$\infty$	ſ	Π	Σ		9	μ	%
003C	2265	2264	00B1	2248	007E	00AC	005E	221E	222B	220F	2211	221A	2202	00B5	0025
%	••••	$\Diamond$													

#### Arrows

	7	$\rightarrow$	7	<b>1</b>	Ľ	$\leftarrow$	Z	$\Leftrightarrow$	$\mathbf{\hat{T}}$			
2191	2197	2192	2198	2193	2199	2190	2196	2194	2195			

#### **Box Drawing Characters**

2581	2582	2583	2584	2585	2586	2587	2588	2580	2594	258F	258E	258D	258C	258B	258A
														·····	
2589	2590	2595	2596	2597	2598	2599	259A	259B	259C	259D	259E	259F	2591	2592	2593
			▼		Δ	$\triangleright$	$\nabla$	4	٦٢	ה	Г		Ţ		L
25A0	25B2	25B6	25BC	25C0	25B3	25B7	25BD	25C1	2566	2557	2554	2550	2569	255D	255A
	JL T	┨	L	T	7	Г		L		L		╉	-	ŀ	X
2551	256C	2563	2560	252C	2510	250C	2500	2534	2518	2514	2502	253C	2524	251C	2573
2572	2571														

#### **Powerline Glyphs**

Y	•	L N	C N		>		<				
E0A0	E0A2	E0A1	E0A3	E0B0	E0B1	E0B2	E0B3				

#### **Stylistic Sets**

0	0	Ŋ	0	7	7					
ss01	ss02	ss03	ss04	ss05	ss06					

#### Programming Ligatures - Group A

	•	. =		•	-		•	<	•	:	•	:	:	
002E	002E	002E 003D	002E	002E	002E	002E	002E	003C	003A	003A	003A	003A	003A	

	=		-	=	• ,	;	;	;	;	?	?	?	?	?	
003A	003D	003A	003A	003D	003B	003B	003B	003B	003B	003F	003F	003F	003F	003F	

	?	?	•		?	?	•	?	=	*	*	*	*	*	
002E	003F	003F	002E	003A	003F	003F	003A	003F	003D	002A	002A	002A	002A	002A	

/	*	*/	/*>	*				
002F	002A	002A 002F	002F 002A	002A				

< –	_	>	_	<	>	_	<	( —			-	>		
	002D	0025	002D	0020	0025	002D	0020	002D	002D	002D	002D	0025		
, UU2D	002D	003E	002D	0030	003E	002D	0030	002D	002D	002D	002D	003E		
<<	_	_	>	>		<	<	>	>		<	( —	<	
C 003C	002D	002D	003E	003E	002D	003C	003C	003E	003E	002D	003C	002D	003C	
> -	>	<	( —			-	>							
002D	003E	003C	002D	007C	007C	002D	003E	002D	007C	007C	002D	007C	007C	002D
</th <th></th> <th>_</th> <th>&lt;</th> <th>&lt;#</th> <th>·</th> <th>_</th> <th>&lt;</th> <th>=</th> <th>_</th> <th>&gt;</th> <th>&gt;</th> <th></th> <th></th> <th></th>		_	<	<#	·	_	<	=	_	>	>			
0021	002D	002D	003C	0023	002D	002D	003C	003D	003D	003E	003D	003E		
<=				>	<	<			:>	>		:<	<	
C 003D	003D	003D	003D	003E	003C	003C	003D	003D	003E	003E	003D	003C	003C	
>>		<	( =	<	>	-	>	<					>	
003E	003D	003C	003D	003C	003E	003D	003E	003C	003D	007C	007C	003D	003E	
<=	>	<	<=	=;	>						/	//		
C 003D	003E	003C	003D	003D	003E	007C	007C	003D	007C	003D	002F	002F	003D	
	0025		002D											
	<ul> <li>002D</li> <li>003C</li> <li>003C</li> <li>003C</li> <li>003C</li> <li>003D</li> <li>003D</li> <li>003D</li> <li>003E</li> <li>003E</li> <li>003D</li> <li>003D</li> </ul>	002D     002D       002C     002D       003C     002D       002D     003E       002D     003E       002D     003E       002D     003E       002D     003E       002D     003E       003D     003D       003E     003D       003E     003D       003E     003D       003E     003D	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

#### Programming Ligatures - Group C

<	<	>	>	<	<	<	>	>	>	<	>	<	\$	\$	>
003C	003C	003E	003E	003C	003C	003C	003E	003E	003E	003C	003E	003C	0024	0024	003E
<	\$	>	<	+	+	>	<	:+	>	<	:		<		
003C	0024	003E	003C	002B	002B	003E	003C	002B	003E	003C	003A	003A	003C		
<		<	>	:	•	>	<	~	~	>	<	~	>		
003C	003A	003C	003E	003A	003A	003E	003C	007E	007E	003E	003C	007E	003E		
003C	003C	<b>0</b> 07E	003C	007E	<b>0</b> 07E	007E	007E	<b>O03E</b>	<b>0</b> 07E	<b>0</b> 07E	C 003C	007C	007C	<b>0</b> 03E	
003C	007C	<b>&gt;</b>	003C	007C	007C	007C	007C	<b>&gt;</b>	003C	007C	007C	007C			
			>	<	/	/	>	<	/	>	<	*	*	>	
007C	007C	007C	003E	003C	002F	002F	003E	003C	002F	003E	003C	002A	002A	003E	
0030	*	<b>&gt;</b>	■ ■	2003E	<b>&gt;</b>										

Programming Ligatures - Group D

#	(	#	{	#	[	]	#	#	!	#	?	#	=	#	_
0023	0028	0023	007B	0023	005B	005D	0023	0023	0021	0023	003F	0023	003D	0023	005F
#		(	#	#	#	#	#	#	<i>‡</i> #	#7	#				
0023	005F	0028	0023	0023	0023	0023	0023	0023	0023	0023	0023				

Programming Ligatures - Group E

[			]	[	<	>	]	{		!		ļ	}	{	
005B	007C	007C	005D	005B	003C	003E	005D	007B	0021	0021	0021	0021	007D	007B	007C
	}	{	{	}	}	{	{		_	-		}	}		
007C	007D	007B	007B	007D	007D	007B	007B	002D	002D	002D	002D	007D	007D		
ł	[ ]			/	/	/	/	/	ļ	!					
007B	0021	002D	002D	002F	002F	002F	002F	002F	0021	0021					

#### Programming Ligatures - Group F

W	/W	W	þ	_	&	8	8	8	8	&	=	~	b	+	+
0077	0077	0077	0040	005F	0026	0026	0026	0026	0026	0026	003D	007E	0040	002B	002B
+	•+	+				/									
002B	002B	002B	002F	005C	002F	002F	005F	007C	005F	007C	007C				

#### Programming Ligatures - Group G

_	•					! :			=		=	_		:/:	
003D	003A	003D	003A	003D	003D	0021	003D	002F	003D						
_	~	~		^	=		_		=		=	_		~	
003D	007E	007E	002D	005E	003D	005F	005F	0021	003D	0021	003D	003D	002D	007E	
002D	002D	002D	002D	002D											

#### **Programming Ligatures - Arithmetics**

╉	+			/	—	&	8					
002B	002B	002D	002D	002F	003D	0026	0026	007C	007C	007C	007C	003D

#### **Programming Ligatures - Comparison**

<		>		<	=	>			
003C	003D	003E	003D	003C	003D	003E			

#### Programming Ligatures - Logic

/			/									
002F	005C	005C	002F	002D	007C	005F	007C	005F	007C	002D	007C	003D

		_			_				
007C	007C	002D	007C	007C	003D				

#### **Programming Ligatures - Scope**

	>		>		:					
002D	003E	003D	003E	003A	003A	005F	005F			

#### Programming Ligatures - Equality

	_		_	—				/	—		=	
003D	003D	003D	003D	003D	0021	003D	003D	002F	003D	0021	003D	003D

#### **Programming Ligatures - Bitwise**

<	<	<	<	<	<	<	=	>	>	>	>	>
003C	003C	003C	003C	003C	003C	003C	003D	003E	003E	003E	003E	003E

>	>=		^=	
003E	003E 003D	007C 003D	XXXX 003D	

#### **Programming Ligatures - Comments**

/	*	*	/	/	*	*	/	/	/	/	/	
002F	002A	002A	002F	002F	002A	002A	002F	002F	002F	002F	002F	

#### **Programming Ligatures - Other**

	>		<	>	•	<	:		•		#	
003A	003E	003A	003C	003E	003A	003C	003A	003A	003A	003D	0023	0021

#### Programming Ligatures - Other

{			}	#	[		#			
007B	007C	007C	007D	0023	005B	005D	0023			

#### **Programming Ligatures - Markdown**

#	#	#	#	#	#	#	#	#		
0023	0023	0023	0023	0023	0023	0023	0023	0023		

	_		_	_				
	1				 	 	 	 
002D	002D	002D	002D	002D				

#### **Programming Ligatures - HTML**

<	/	<				<	/	>			>	
003C	002F	003C	0021	002D	002D	003C	002F	003E	002D	002D	003E	

/	>	W	W	W				
002F	003E	0077	0077	0077				

#### **Programming Ligatures - Javascript**

*	*		_			_		?	•		
002A	002A	003D	003D	003D	0021	003D	003D	003F	002E		

#### Programming Ligatures - Go

003A 00	3D					

#### Programming Ligatures - Java

<	>	<	~	>				
003C	003E	003C	007E	003E				

#### Programming Ligatures - C#

?	•	?	?					
003F	002E	003F	003F					

#### Programming Ligatures - Scala

	!	_		:	_		•	•	<	:	<	
003D	0021	003D	003D	003A	003D	003A	003A	003A	003C	003A	003C	

#### Programming Ligatures - Haskell

=	>	>		<	<	>	=	>	<	=	<	
003D	003E	003E	003D	003C	003C	003E	003D	003E	003C	003D	003C	

<	\$	<	\$	>	\$	>	<	+	<	+	>	
003C	0024	003C	0024	003E	0024	003E	003C	002B	003C	002B	003E	

+	>	<	*	<	*	>	*	>	<	>		
002B	003E	003C	002A	003C	002A	003E	002A	003E	003C	003E	002E	003D

<	>	#		╋	+	-₽-	╋	+		
003C	007C 003	E 0023	003D	002B	002B	002B	002B	002B		

#### **Programming Ligatures - Swift**

	. <					
	002E 003C					 

#### **Programming Ligatures - Ruby**

						~		~	<	=	>	
002E	002E	002E	002E	002E	003D	007E	0021	007E	003C	003D	003E	

#### Programming Ligatures - F#

<				<			<			>	%	%
003C	007C	007C	007C	003C	007C	007C	003C	007C	007C	003E	0025	0025

	>				>	<					]
007C	007C 003	E 007C	007C	007C	003E	003C	003D	005B	007C	007C	005D

$\sim$		~	$\sim$					
007E	002D	007E	007E					

#### **Programming Ligatures - Kotlin**

	-						
0021	0021						

#### **Programming Ligatures - R**

#### **Programming Ligatures - Clojure**

#	{	#	(	#	_	#	,	(	#	?	#	•
0023	007B	0023	0028	0023	005F	0023	005F	0028	0023	003F	0023	003A

- /	•	~[	d					
003B	003B	007E	0040					

#### Programming Ligatures - Elixir

<			>	#	{	}		>	<	>	
003C	002D	002D	003E	0023	007B	007D	007C	003E	003C	003E	

- <sup>18 pt</sup> When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes.
- <sup>16 pt</sup> When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This
- <sup>14 pt</sup> When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment.

- When a quantum system is not a macroscopic measuring 12 pt instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that
- When a quantum system is not a macroscopic measuring instrument or an 10 pt ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general seem to have a single past.
- 8 pt / 6 pt When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general see to have a single past. The formalism of the unitary operators implicitly uses the concept of time, since a unitary operator describes a change of state, but it says nothing a priori about space and mass. It seems false that space and mass are essentially classical concepts, that quantum physics does not explain their existence, and that therefore it can not explain by itself the classical appearances of the world. Most quantum equations have classical equivalents and we 18 pt

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes.

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This

<sup>14 pt</sup> When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths 12 pt

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that

- 10 pt When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general seem to have a single past.
- 8 pt / 6 pt When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general see to have a single past. The formalism of the unitary operator describes a change of state, but it says nothing a priori about space and mass. It seems false that space and mass are essentially classical concepts, that quantum physics does not explain their existence, and that therefore it can not explain by itself the classical appearances of the world. Most quantum equations have classical equivalents and we

- <sup>18 pt</sup> When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes.
- When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This
- <sup>14 pt</sup> When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths

- When a quantum system is not a macroscopic measuring 12 pt instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real. because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that
- When a quantum system is not a macroscopic measuring instrument or an 10 pt ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general seem to have a single past.
- 8 pt / 6 pt When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general seem to have a single past. The formalism of the unitary operators implicitly uses the concept of time, since a unitary operator describes a change of state, but it says nothing a priori about space and mass. It seems false that space and mass are essentially classical concepts, that quantum physics does not explain their existence, and that therefore it can not explain by itself the classical appearances of the world. Most quantum equations have classical equivalents and we

18 pt

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes.

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This

<sup>14 pt</sup> When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is 12 pt privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that

- 10 pt When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general seem to have a single past.
- 8 pt / 6 pt When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that

When a quantum system is not a macroscopic measuring instrument or an ideal observer, no pointer state basis is privileged (see 5.5). One can still define multiple destinies by arbitrarily choosing one of its bases of states. But there is no reason to think that these destinies are real, because the states which define them are not, in general, states by which the system really passes. In reality, it is in a superposition of these states or in a state entangled with the environment. This is why this book calls them virtual quantum destinies. Another fundamental reason prevents the identification of Feynman paths with real destinies. They would attribute very many pasts to the same present state. Feynman paths do not form a tree structure because they can converge as easily as they diverge. A quantum state on a Feynman path is a point of convergence of many paths that would define as many pasts if they were real destinies. This property of convergence of virtual destinies is important to make use of the parallelism of quantum computation, but it seems obviously excluded for real destinies, which in general seem to have a single past. The formalism of the unitary operators implicitly uses the concept of time, since a unitary operator describes a change of state, but it says nothing a priori about space and mass. It seems false that space and mass are essentially classical concepts, that quantum physics does not explain their existence, and that therefore it can not explain by itself the classical appearances of the world. Most quantum equations have classical equivalents and we

#### **U.S. Graphics Company**

U.S. Graphics, LLC. Phoenix, AZ 85016 United States Engineering graphics for professionals. <u>berkeleygraphics.com</u>

Address inquiries to: inquiry@berkeleygraphics.com

#### **Design philosophy**

Emergent over prescribed aesthetics. Expose state and inner workings. Dense, not sparse. Explicit is better than implicit. Engineered for Human vision and perception. Regiment functionalism. Performance is design. Verbosity over opacity. Ignore design trends. Timeless and unfashionable. Flat, not hierarchical. Diametrically opposite of minimalism, as complex as it needs to be. Driven by objective reasoning and common sense. Don't infantilize users.

#### Designer

Neil Panchal https://neil.computer

#### **Further Information**

Report bugs and feedback to: <u>support@us.graphics</u>

Privacy Policy: https://usgraphics.com/legal/privacy-policy

Terms & Conditions: https://usgraphics.com/legal/terms-and-conditions

License Information: https://usgraphics.com/legal/license

#### **U.S. Graphics Company**

Engineering graphics.